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ABSTRACT

Enrollment in postsecondary education in the state of Washington is examined. A series of tables and charts compare selected enrollment-related variables among the 50 states. These variables include: total enrollment, degree credit enrollment by level, educational attainment, source of students, tuitions and fees, faculty tenure and salaries, and state appropriations for postsecondary education. A statistical analysis is made of enrollment growth patterns in Washington's institutions of higher education since 1971. This is followed by an analysis of the effects of demographic changes and changes in the enrollment participation rate on future (1970-1990) enrollment in higher education in the state. Specific long-range policy issues that result from the present condition of postsecondary education in the state of Washington are described, as well as long-range enrollment trends. The appendices contain: a description of postsecondary institutions in Washington in terms of location, history, organizational structure, mission, roles, activities, and current enrollment characteristics; and a summary report of the workshop on long-range enrollments in postsecondary education in Washington. (SPG)

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POSTSECONDARY EDUCATION ENROLLMENT TRENDS, FORECAST, AND ISSUES IN WASHINGTON: 1970 - 1990

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MAY, 1978

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TABLE OF CONTENTS

Acknowledgements i

List of Tables iii

List of Figures. vii

CHAPTER ONE

Higher Education: Some National Comparisons 3

Enrollment. 5

Source of Students. 13

Educational Attainment. 16

Faculty Tenure and Salaries 19

Tuition and Fees. 24

State and Local Appropriations. 25

Summary 29

CHAPTER TWO

Higher Education Enrollment Growth in Washington: Recent Trends. 31

Headcount Enrollment Growth 34

New Enrollment Patterns 39

Age. 39

Sex. 44

Age and Sex. 47

Attendance Status. 51

CHAPTER THREE

Higher Education Enrollment Growth in Washington: 1970-1990. 59

The Demographic Factor. 63

The Enrollment Rate Factor. 66

Public Four-Year Institutions. 66

Community College System 69

The Enrollment Forecast 70
Public Four-Year Institutions. 70
Community College System 73
Conclusion and Summary. 77

CHAPTER FOUR

Enrollment Change and Policy Considerations in Postsecondary Education. 81
The Changing Education Environment. 84
Long Range Enrollment Policy Issues 86
The Management of Enrollment Growth. 87
Managing the "Type" of Enrollment Growth 92
Financing Higher Education 95
Summary 102

APPENDIX A

Institutions: Goals, Missions, and Objectives 105

APPENDIX B

A Summary Report of the Workshop on Long Range Enrollments in Postsecondary Education 163

Bibliography 173

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Prior to developing the study design a two-day workshop was held at Fort Worden on May 9th and 10th, 1977 to identify the research problem and obtain input from state agencies concerned with enrollment change and educational planning. Appendix B contains a summary report of this workshop as well as the names and affiliations of the participants. Many of these people provided data specifically related to the study and assisted by reviewing a draft of the report. We are grateful for their suggestions and assistance rendered. Dr. William Chance, Council for Postsecondary Education, was especially helpful.

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David B. Brinkerhoff
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LIST OF TABLES

Table Number	Title	Page Number
1.1	Rank Order Distributions of Population and Headcount Enrollment in Institutions of Higher Education by State, 1976	6
1.2	Rank Order Distributions Of Participation Rates in Institutions of Higher Education by State	8
1.3	Total Enrollment in Institutions of Higher Education, by Type and Level of Enrollment and by State: Fall 1975	10
1.4	Total Enrollment in Institutions of Higher Education by Attendance Status, Sex of Student, Control of Institution, and State: Fall 1976	12
1.5	Residence and Migration of College Students by State: Fall 1975	14
1.6	Years of School Completed by Persons 25 Years old and over, by State: 1970	18
1.7	Rank Order Distribution of Percent of Full-Time Instructional Faculty with Tenure by Institutional Control and State, 1976-77	20
1.8	Mean Salaries of Full-Time Instructional Faculty (all ranks combined) in Public Institutional Units of Higher Education, by Length of Contract, Sex of Faculty Member, and by State or other area: Aggregate United States, 1975-76	23
1.9	Summary of Undergraduate Tuition and/or Required fees by Institutional Classification, Residence and Area, 1972-73 and 1975-76	26
1.10	Rank Order Distributions of Combined State and Local Appropriations for Higher Education, 1976-77	28
1.11	Rank Order Distribution of Combined Expenditures of State and Local Funds for Vocational Education Fiscal Year 1975	30
2.1	Headcount Enrollment (Fall, 1976) Compared to FTE Enrollment (Annual Average 1976-77)	38
2.2	Enrollment in Vocational-Technical Institutes by Program, FY 1972-73 through 1976-77	39

Table Number	Title	Page Number
2.3	Change in Headcount Enrollment by Age and Type of Institution, Fall Quarters 1971 through 1977	40
2.4	Percent Change in Fall Enrollment by Age, 1971-1977	41
2.5	Change in Headcount Enrollment by Sex and Type of Institution, Fall Quarters 1971-1977	46
2.6	Percent Fall Headcount Enrollment by Age and Sex in Public Institutions of Higher Education, State of Washington, 1971-77	50
2.7	Percent of Students taking less than Ten Credit Hours, Fall Quarters 1971-77	51
2.8	Average Credit Hour Load by Age, Sex, and Institutional Type, Fall 1976	56
3.1	Undergraduate Degree-Credit Enrollment	62
3.2	Components of Population Change, Revised Population Series developed July 1977, State of Washington, 1920-1977	64
3.3	Components of Change by Five Year Intervals, State of Washington	65
3.4	Fall and Annual Average Headcount Enrollment, Public Four-Year College and Universities, 1971-1990	74
3.5	Annual Average Student Credit Hours and Credit Hour Load, Public Four-Year College and Universities, 1971-1990	76
3.6	Fall Headcount, Fall FTE's, and Annual Average FTE Enrollment Estimates, Washington Community Colleges, 1971-1990	80
A.1	Fall Headcount Enrollment by Institution, State of Washington, 1976	113
A.2	Student Mix, Fall 1977, University of Washington	123
A.3	Student Mix, Fall 1977, Washington State University	134
A.4	Student Mix, Fall 1977, Central Washington University	139
A.5	Student Mix, Fall 1977, Eastern Washington University	144

Table Number	Title	Page Number
A.6	Student Mix, Fall 1977, The Evergreen State College	149
A.7	Student Mix, Fall 1977, Western Washington University	153
A.8	Summary of Student Characteristics, Academic and Occupational Students Only, Washington Community Colleges, Fall Quarter 1977	157
A.9	Student Mix, Fiscal Year 1976, Vocational-Technical Institutes	161

LIST OF FIGURES

Figure Number	Title	Page Number
2.1	Fall Headcount Enrollment in Community Colleges, Public Four-Year, and Private Four-Year Institutions as a Percent of Statewide Enrollment, 1970-77	36
2.2	Fall Headcount Enrollment Levels and Percentage Changes in Higher Education, State of Washington, 1970-1977	37
2.3	Percentage Change in Enrollment in Higher Education, State of Washington, 1970-1977	37
2.4	Percent Change in Fall Headcount Enrollment, by Age (Community Colleges, 1971-77)	42
2.5	Percent Change in Fall Headcount Enrollment, by Age (Four-Year Public College and Universities, 1971-77)	42
2.6	Sex as a Percent of Total Headcount Enrollment	45
2.7	Percent Change From 1971 in Fall Headcount Enrollment in Community Colleges and Four-Year Public Institutions: Male	48
2.8	Percent Change From 1971 in Fall Headcount Enrollment in Community Colleges and Four-Year Public Institutions: Female	49
2.9	Annual Average Credit Hours per Student by Four-Year Public Institutions and Community College Systems, 1971-1972 to 1976-1977	53
2.10	Headcount Growth Compared to Student Credit Hour Growth, Public Four-Year College and Universities, Fall Quarters 1971-77 (Percent Change using 1971 as Base Year)	54
2.11	Headcount Growth Compared to FTE and Average Credit Hour Load Growth, Washington Community Colleges, Fall Quarters 1971-77 (Percent Change Since 1971)	55
3.1	Population Range by Selected Age Groups, State of Washington, 1960-2000	67
3.2	Enrollment Participation Rates by Age, Fall 1971-1977, Public Four-Year Institutions	68

Figure Number	Title	Page Number
3.3	Enrollment Participation Rates by Age and Sex: Male; Washington Community Colleges, Fall 1971-Fall 1977	71
3.4	Enrollment Participation Rates by Age and Sex: Female; Washington Community Colleges, Fall 1971-Fall 1977	72
3.5	Fall Headcount Enrollment Distributions by Age, Public Four-Year College and Universities, 1971-1990	75
3.6	Fall Headcount Enrollment Distributions by Age, Community Colleges, 1971-1990	79
A.1	Colleges and Universities by County	112
A.2	Institutions by Instructional/Research Level and Curriculum Emphasis	115

CHAPTER ONE

HIGHER EDUCATION: SOME NATIONAL COMPARISONS

HIGHER EDUCATION: SOME NATIONAL COMPARISONS

In comparing the State of Washington with the rest of the U. S., the following highlights and conclusions emerge:

ENROLLMENT

1. Participation rates in Washington are relatively high.

2. Non-degree credit occupational programs in Washington represent a higher than average part of total credit enrollment compared to other states.

3. Mix of degree-credit enrollment by level of enrollment is similar to the rest of the U. S.

4. Part-time enrollment in the State of Washington is higher than in most other states.

5. Enrollment by sex of student is more evenly balanced in Washington than in most other states.

SOURCE OF STUDENT

6. Total enrollment in Washington is not influenced significantly by out-of-state students.

7. Of those Washington State residents who enroll in higher education, a relatively small percent have chosen to enroll in institutions outside the state.

8. The net migration component of enrollment has remained relatively stable over time in the State of Washington.

EDUCATIONAL ATTAINMENT

9. Washington has a relatively high level of educational attainment.

FACULTY

10. A high percentage of full-time instructional faculty in Washington are tenured.

11. Higher percentages of men are tenured than are women faculty.

12. The mean salaries of full-time instructional faculty on 9-10 month contracts are close to the national average.

13. The mean salaries of full-time instructional faculty on 11-12 month contracts are among the highest in the U. S.

TUITION AND FEES

14. Resident tuition and fee charges in Washington are relatively low compared to other states.

STATE AND LOCAL APPROPRIATIONS

15. State and local appropriations for higher education in Washington are, in general, higher than most other states.

16. Nationally, as well as in the State of Washington, vocational education is primarily supported from state and local revenue.

17. The State of Washington's per capita support levels for vocational education are among the highest in the U.S.

CHAPTER ONE

HIGHER EDUCATION: SOME NATIONAL COMPARISONS

In describing and evaluating the condition of postsecondary education in the State of Washington, a number of educational statistics are presented that make comparisons between the fifty states. These statistics provide a broad context for viewing the quantity, diversity, and support for postsecondary education at the state level. The statistical measures included are total enrollment, degree credit enrollment by level, educational attainment, source of students, tuition and fees, faculty tenure and salaries, and state appropriations for postsecondary education. Although additional statistical data are available, those included provide sufficient material to describe Washington's activities in postsecondary education, particularly when compared to the rest of the nation.*

ENROLLMENT. Table 1.1 contains July 1976 population estimates and Fall 1976 total and public enrollment in higher education for each state.** A rank order correlation coefficient (rho) was calculated between populations and total enrollment to determine the extent to which these distributions covary. The obtained value was rho = .979. This correlation is extremely high and means that approximately 98 percent of the time we should be able to predict accurately the rank order of enrollments for the fifty states by having knowledge of the rank order of population size. A close examination of the rank order distributions reveals that only two states, ARIZONA and WASHINGTON, differ importantly from this covariation pattern. In 1976, the rank order of states on the basis of population shows Washington to be ranked

*The comparisons presented in this section are by no means exhaustive. We have included only those comparisons for which we felt the data were reliable and informative. Even so, the reader is cautioned to to approach the comparative data and conclusions with guardedness in that the aggregated data at the state level may contain measurement error that results from inconsistent definitions, reporting problems, etc.

**Unless otherwise noted, the data presented in this sections show comparisons between states for higher education rather than the more broadly defined concept of "postsecondary edcuation". The reason for this is that some vocational education data are not comparable and proprietary education data are virtually nonexistent.

TABLE 1.1

Rank Order Distributions of Population and Headcount Enrollment in Institutions of Higher Education by State, 1976

A. Provisional Estimates of Total Resident Population, July 1, 1976[1]		B. Total Enrollment in Higher Education, All Institutions, Fall 1976[2]		C. Total Enrollment in Higher Education, Public Institutions, Fall 1976[2]	
United States	214,659	United States	11,105,923	United States	8,741,548
1. California	21,520	1. California	1,800,926	1. California	1,629,965
2. New York	18,084	2. New York	954,815	2. New York	557,229
3. Texas	12,487	3. Texas	623,701	3. Texas	542,103
4. Pennsylvania	11,862	4. Illinois	605,156	4. Illinois	465,602
5. Illinois	11,229	5. Michigan	485,710	5. Michigan	424,139
6. Ohio	10,690	6. Pennsylvania	473,170	6. Ohio	345,771
7. Michigan	9,104	7. Ohio	445,464	7. Pennsylvania	288,217
8. Florida	8,421	8. Massachusetts	367,045	8. Florida	286,423
9. New Jersey	7,336	9. Florida	346,903	9. New Jersey	220,621
10. Massachusetts	5,809	10. New Jersey	290,902	10. Wisconsin	206,764
11. North Carolina	5,469	11. North Carolina	247,163	11. Virginia	205,120
12. Indiana	5,302	12. Wisconsin	236,960	12. WASHINGTON	203,389
13. Virginia	5,032	13. Virginia	235,300	13. North Carolina	194,882
14. Georgia	4,970	14. WASHINGTON	226,297	14. Maryland	181,392
15. Missouri	4,778	15. Missouri	223,089	15. Arizona	171,816
16. Wisconsin	4,609	16. Indiana	220,393	16. Indiana	166,249
17. Tennessee	4,214	17. Maryland	210,079	17. Massachusetts	158,142
18. Maryland	4,144	18. Minnesota	186,221	18. Missouri	156,393
19. Minnesota	3,965	19. Tennessee	181,931	19. Minnesota	147,597
20. Louisiana	3,841	20. Arizona	176,687	20. Tennessee	140,175
21. Alabama	3,665	21. Georgia	169,838	21. Alabama	139,092
22. WASHINGTON	3,612	22. Alabama	158,390	22. Georgia	138,638
23. Kentucky	3,428	23. Louisiana	153,986	23. Colorado	135,583
24. Connecticut	3,117	24. Colorado	149,045	24. Louisiana	133,341
25. Iowa	2,870	25. Connecticut	147,629	25. Oklahoma	124,797
26. South Carolina	2,848	26. Oklahoma	144,535	26. Oregon	122,880
27. Oklahoma	2,766	27. Oregon	138,625	27. Kansas	108,645
28. Colorado	2,583	28. Kentucky	127,857	28. Kentucky	105,545
29. Mississippi	2,354	29. South Carolina	122,921	29. South Carolina	97,068
30. Oregon	2,329	30. Iowa	122,494	30. Connecticut	91,524
31. Kansas	2,310	31. Kansas	122,238	31. Mississippi	89,585
32. Arizona	2,270	32. Mississippi	100,634	32. Iowa	84,459
33. Arkansas	2,109	33. Utah	84,563	33. West Virginia	69,931
34. West Virginia	1,821	* District of Columbia	80,839	34. Nebraska	64,148
35. Nebraska	1,553	34. West Virginia	80,775	35. Arkansas	58,607
36. Utah	1,228	35. Nebraska	77,881	36. Utah	54,490
37. New Mexico	1,168	36. Arkansas	68,128	37. New Mexico	51,030
38. Maine	1,070	37. Rhode Island	60,435	38. Hawaii	44,063
39. Rhode Island	927	38. New Mexico	55,328	39. Nevada	32,206
40. Hawaii	887	39. Hawaii	47,644	40. Idaho	31,852
41. Idaho	831	40. Idaho	39,563	41. Rhode Island	31,404
42. New Hampshire	822	41. Maine	39,393	42. Maine	29,158
43. Montana	753	42. New Hampshire	38,859	43. North Dakota	28,514
* District of Columbia	702	43. Nevada	32,391	44. Montana	27,619
44. South Dakota	686	44. Delaware	31,491	45. Delaware	26,733
45. North Dakota	643	45. Montana	30,674	46. New Hampshire	22,209
46. Nevada	610	46. North Dakota	30,556	47. South Dakota	21,643
47. Delaware	582	47. South Dakota	30,208	48. Wyoming	18,785
48. Vermont	476	48. Vermont	29,075	49. Vermont	17,239
49. Wyoming	390	49. Wyoming	18,785	50. Alaska	17,051
50. Alaska	382	50. Alaska	17,338	* District of Columbia	13,927
U. S. Service Schools		U. S. Service Schools	17,893	U. S. Service Schools	17,893

[1]U.S. Department of Commerce, "Population Estimates and Projections," Series P-25, No. 642, 1976 (Numbers in thousands).

[2]U.S. Department of Health, Education and Welfare, "Fall Enrollment in Higher Education, by Control of Institution, Sex, and Attendance Status of Students, All Institutions, Fall, 1976," January, 1977 preliminary data.

OFM/PEES/P-426
1/78

22nd and Arizona to be ranked 32nd. Their corresponding rank order on enrollment size, however, is 14th and 20th respectively. While the discrepancy in rank order for Arizona is largely due to the number of out-of-state students attending institutions of higher education in Arizona (see Table 1.5), the discrepancy in Washington is primarily attributed to higher participation rates.

Because of demographic differences between states it is difficult to meaningfully interpret absolute enrollment numbers when comparing states. Consequently, we have calculated the crude participation rates for both total and public enrollment in higher education. Crude participation rates standardize the number of enrollments on a per thousand population basis and are calculated as follows:

$$CPR = \frac{\text{enrollment size}}{\text{population size}} \times 1{,}000$$

The crude participation rates for each state are presented in Table 1.2 along with participation rates for the traditional 18-24 age population.*

In the State of Washington, 62.65 persons per thousand population were enrolled in institutions of higher education in the Fall of 1976. This ranks 6th in the U.S. behind California (83.69), Arizona (77.84), Utah (68.86), Rhode Island (65.19), and Massachusetts (63.19). With the exception of Washington, the high participation rates in these states are inflated substantially by nonresident students (see Table 1.5). When comparing enrollment in just the public sector, the State of Washington enrolled 56.31 persons per thousand population in public institutions which ranks 3rd behind California (75.74) and Arizona (75.69). Obviously, Washington's overall participation rate in higher education is unusually high in relationship to population size and student migration patterns.**

*Due to the absence of age-specific population estimates for each state, we have not calculated "refined" participation rates which take into account differences in the age structure of each state's population. Instead, we have relied on the 18-24 age participation rates published by the Education Commission of the States for comparative purposes.

**The crude participation rates presented in Table 1.2 are based on

TABLE 1.2

Rank Order Distributions of Participation Rates in Institutions of Higher Education, by State

A. Crude Participation Rates Based on Total Enrollment[1]		B. Crude Participation Rates Based on Public Enrollment[1]		C. Refined Participation Rates for 18-24 year-olds in Public Institutions[2]	
United States	.0517	United States	.0407		
1. California	.0837	1. California	.0757	1. Arizona	.53
2. Arizona	.0778	1. Arizona	.0757	1. California	.53
3. Utah	.0689	3. WASHINGTON	.0563	3. Oregon	.44
4. Rhode Island	.0652	4. Oregon	.0528	4. WASHINGTON	.41
5. Massachusetts	.0632	4. Nevada	.0528	4. Wyoming	.41
6. WASHINGTON	.0626	6. Colorado	.0525	6. Nevada	.40
7. Vermont	.0611	7. Hawaii	.0497	7. Colorado	.35
8. Oregon	.0595	8. Wyoming	.0482	8. Delaware	.34
9. Colorado	.0577	9. Kansas	.0470	8. Michigan	.34
10. Delaware	.0541	10. Michigan	.0466	11. Hawaii	.33
11. Illinois	.0539	11. Delaware	.0459	11. Oklahoma	.33
12. Hawaii	.0537	12. Oklahoma	.0451	11. Wisconsin	.33
13. Michigan	.0531	13. Wisconsin	.0449	13. Kansas	.32
13. Nevada	.0531	14. Alaska	.0446	13. New York	.32
15. Kansas	.0529	15. Utah	.0444	15. Maryland	.31
16. New York	.0528	15. North Dakota	.0444	17. Utah	.30
17. Oklahoma	.0523	17. Maryland	.0438	17. North Dakota	.30
18. Wisconsin	.0514	18. New Mexico	.0437	17. New Mexico	.30
19. Maryland	.0507	19. Texas	.0434	20. Illinois	.29
20. Nebraska	.0502	20. Illinois	.0415	20. Texas	.29
21. Texas	.0500	21. Nebraska	.0413	20. Idaho	.29
22. Wyoming	.0482	22. Virginia	.0408	20. West Virginia	.29
23. Idaho	.0476	23. West Virginia	.0384	24. Virginia	.28
24. North Dakota	.0475	24. Idaho	.0383	24. Alabama	.28
25. Connecticut	.0474	25. Mississippi	.0381	24. Florida	.28
25. New Mexico	.0474	26. Alabama	.0380	24. Montana	.28
27. New Hampshire	.0473	27. Minnesota	.0372	28. Vermont	.27
28. Minnesota	.0470	28. Montana	.0367	28. Nebraska	.27
29. Virginia	.0468	29. Vermont	.0362	28. Connecticut	.27
30. Missouri	.0467	30 North Carolina	.0356	31. Minnesota	.26
31. Alaska	.0454	31. Louisiana	.0347	32. Missouri	.25
32. North Carolina	.0452	32. South Carolina	.0341	32. Mississippi	.25
33. West Virginia	.0444	33. Florida	.0340	32. New Jersey	.25
34. South Dakota	.0440	34. Rhode Island	.0339	35. Rhode Island	.24
36. Tennessee	.0432	35. Tennessee	.0333	35. Alaska	.24
36. Alabama	.0432	36. Missouri	.0327	35. North Carolina	.24
36. South Carolina	.0432	37. Ohio	.0324	35. Louisiana	.24
38. Mississippi	.0428	38. South Dakota	.0316	40. South Dakota	.23
39. Iowa	.0427	39. Indiana	.0314	40. Tennessee	.23
40. Ohio	.0417	40. New York	.0308	40. South Carolina	.23
41. Indiana	.0416	40. Kentucky	.0308	40. Ohio	.23
42. Florida	.0412	42. New Jersey	.0301	40. Maine	.23
43. Montana	.0407	43. Connecticut	.0294	43. Indiana	.22
44. Louisiana	.0401	43. Iowa	.0294	43. Kentucky	.22
45. Pennsylvania	.0399	45. Georgia	.0279	45. Iowa	.21
46. New Jersey	.0396	46. Arkansas	.0278	47. Massachusetts	.20
47. Kentucky	.0373	47. Massachusetts	.0272	47. New Hampshire	.20
48. Maine	.0368	47. Maine	.0272	47. Georgia	.20
49. Georgia	.0342	49. New Hampshire	.0270	47. Arkansas	.20
50. Arkansas	.0323	50. Pennsylvania	.0243	50. Pennsylvania	.19

[1] Participation rates were calculated from population estimates and enrollment totals for 1976 as reported in Table 1.1.

[2] The 18-24 age-specific participation rates are for 1974-75 and are reproduced from State Postsecondary Education Profiles Handbook, Education Commission of the States, Report No. 88, March, 1977.

OFM/PEES/P-426
1/78

Furthermore, when participation rates for just the traditional 18-24 age college cohort are compared, Washington is tied with Wyoming (410) for 4th behind California (530), Arizona (530), and Oregon (440). From these statistics it is clear that Washington's participation rate in higher education among the 18-24 age population is considerably higher than most other states.

CONCLUSION: The State of Washington has a high participation rate in institutions of higher education compared to other states. This holds for the crude participation rate as well as the traditional 18-24 age cohort.

Table 1.3 contains additional enrollment comparisons between the fifty states by showing the percent distributions of "credit" enrollments by type (i.e., degree-credit versus non-degree credit students) and level of degree-credit students.* An examination of the percent distributions of degree-credit students by level indicates that the State of Washington does not differ appreciably from other states in mix. That is, the percent of undergraduate and percent of first professional student in Washington is very similar to the U. S. average while the percent graduate is somewhat lower than average and the percent "unclassified" is slightly higher than average.

A more interesting comparision in Table 1.3 is the percent non-degree credit students are of all credit students (see column 9). In the State of Washington, approximately one-fourth (23.8 percent) of the students enrolled for credit in institutions of higher education were pursuing occupational programs that were not "chiefly creditable toward a bachelor's degree." For the most part, these are students enrolled in non-degree

---

total enrollment. When total enrollment is converted to full-time equivalent enrollment, the State of Washington ranks 4th among the states in the percentage of full-time equivalent student enrollment in public institutions to total population. This analysis is presented in Report No. 77-19 published by the Council for Postsecondary Education, "Financial Support of Higher Education in Washington".

*Total enrollment includes students whose programs of study are creditable toward a bachelor's or higher degree and also undergraduate students in one-, two-, or three-year occupational programs which are not chiefly creditable toward a bachelor's degree (i.e., non-degree credit students).

TABLE 1.3
Total Enrollment in Institutions of Higher Education, by Type and Level of Enrollment and by State: Fall 1975

State or Other Area	All degree-credit and non-degree credit students	DEGREE-CREDIT STUDENTS					Non-degree credit students	Percent of non-degree credit students
		Total	Percent undergraduate	Percent first pro.	Percent graduate	Percent unclassified		
1	2	3	4	5	6	7	8	9 = 8 ÷ 2
United States	11,184,859	9,731,431	73.8	2.5	13.0	10.8	1,453,428	13.0
Alabama	164,700	146,653	78.8	2.0	10.4	8.8	18,047	11.0
Alaska	13,998	13,831	67.8	---	8.6	23.6	167	1.2
Arizona	173,542	139,631	70.0	.8	13.5	15.7	33,911	19.5
Arkansas	65,547	61,977	83.7	2.2	9.7	4.3	3,570	5.4
California	1,787,932	1,404,866	70.6	1.8	12.4	15.2	383,066	21.4
Colorado	149,814	130,275	73.3	2.1	10.0	14.7	19,539	13.0
Connecticut	148,491	145,053	73.9	1.7	18.0	6.3	3,438	2.3
Delaware	32,389	29,956	67.7	---	5.9	26.4	2,433	7.5
District of Columbia ...	84,190	83,704	52.2	10.1	23.7	13.9	486	.6
Florida	344,267	295,703	79.0	1.6	8.1	11.3	48,564	14.1
Georgia	173,585	165,595	78.6	2.9	14.4	4.1	7,990	4.6
Hawaii	46,671	37,677	79.4	1.1	9.6	9.9	8,994	19.3
Idaho	39,075	35,347	83.6	.8	9.7	6.0	3,728	9.5
Illinois	584,089	481,260	67.4	3.3	15.1	14.2	102,829	17.6
Indiana	213,820	198,964	75.2	2.6	16.8	5.4	14,856	6.9
Iowa	121,678	106,458	79.4	5.6	11.9	3.1	15,220	12.5
Kansas	120,833	115,266	76.5	1.8	14.5	7.2	5,567	4.6
Kentucky	125,253	113,629	78.3	4.3	14.6	2.8	11,624	9.3
Louisiana	153,213	148,335	80.1	3.5	11.8	4.6	4,878	3.2
Maine	40,443	37,516	70.8	.9	5.5	22.8	2,927	7.2
Maryland	205,570	175,622	65.2	2.1	13.8	18.9	29,948	14.6
Massachusetts	384,485	356,362	70.0	3.4	14.1	12.6	28,123	7.3
Michigan	496,405	414,450	76.6	2.9	13.3	7.1	81,955	16.5
Minnesota	184,756	176,011	77.0	4.7	12.8	5.5	8,745	4.7
Mississippi	99,962	87,743	82.1	2.2	13.4	2.3	12,219	12.2
Missouri	223,115	205,929	72.6	4.3	12.3	10.8	17,186	7.7
Montana	30,843	29,812	85.0	.7	9.1	5.2	1,031	3.3
Nebraska	74,705	66,040	79.0	4.0	12.8	4.2	8,665	11.6
Nevada	30,187	20,916	80.1	---	9.5	10.4	9,271	30.7
New Hampshire	41,030	37,190	76.2	1.3	8.2	14.3	3,840	9.4
New Jersey	297,114	264,655	66.8	1.7	13.7	17.7	32,459	10.9
New Mexico	51,944	50,542	73.1	1.2	12.0	13.8	1,402	2.7
New York	1,005,063	990,196	73.8	2.0	14.8	9.5	14,867	1.5
North Carolina	251,786	187,155	78.0	2.5	12.0	7.6	64,631	25.7
North Dakota	29,743	26,641	83.3	1.8	7.4	7.5	3,102	10.4
Ohio	436,052	367,776	76.4	3.1	13.3	7.2	68,276	15.7
Oklahoma	146,613	131,558	79.4	2.3	14.1	4.3	15,055	10.3
Oregon	145,281	112,148	73.7	2.9	11.2	12.2	33,133	22.8
Pennsylvania	470,536	429,628	72.4	3.2	14.4	10.1	40,908	8.7
Rhode Island	64,479	61,716	68.4	.4	12.5	18.7	2,763	4.3
South Carolina	133,023	121,265	79.0	1.6	11.7	7.7	11,758	8.8
South Dakota	30,260	29,359	83.0	1.6	8.2	7.3	901	3.0
Tennessee	181,435	169,050	79.6	3.0	10.9	6.6	12,385	6.8
Texas	624,390	550,002	79.5	2.6	12.3	5.5	74,388	11.9
Utah	87,323	74,295	86.9	1.7	10.2	1.2	13,028	14.9
Vermont	29,095	27,977	79.4	2.3	7.3	10.9	1,118	3.8
Virginia	244,671	220,231	55.5	1.8	13.1	29.6	24,440	10.0
Washington	227,168	173,165	74.8	2.4	7.5	15.4	54,003	23.8
West Virginia	78,619	70,378	71.5	1.4	15.5	11.7	8,241	10.5
Wisconsin	240,701	179,444	78.2	1.8	13.3	6.7	61,257	25.4
Wyoming	18,078	15,539	68.7	1.4	6.5	23.4	2,539	14.0
U. S. Service Schools ..	36,897	16,940	90.5	---	9.2	.3	19,957	54.1

SOURCE: Adapted from U. S. Department of Health, Education, and Welfare, National Center for Education Statistics, Digest of Education Statistics, 1976.

OFM/PEES/P-426
1/78

vocational programs in the community colleges. Only three states (Nevada, 30.7; North Carolina, 25.7; and Wisconsin 25.4) report a higher percentage of "non-degree credit" students.

CONCLUSION: Non-degree credit students. Compared to other states, Washington's non-degree credit occupational programs account for a higher than average percentage of total credit enrollments.

CONCLUSION: Degree-credit students. The State of Washington does not differ significantly from the rest of the U. S. in the mix of degree-credit students by level.

Table 1.4 contains the distribution of Fall 1976 enrollment in institutions of higher education for each state by attendance status, sex of student, and control of institution. These data indicate that Washington, compared to other states, has a high percentage of part-time students (38.4 percent). Approximately three-fourths of the states have a smaller percentage of part-time students than does the State of Washington.

Table 1.4 also shows that states having large populations are frequently states with large percentages of part-time students (e.g., California, Illinois, Michigan, Florida, New Jersey, New York and Texas). Partial support for this inference is found in the modest correlation coefficient (rho = -.31) between rank on population size and rank on percent full-time students. Although urban/rural data are not available for a complete analysis of the relationship between population size and attendance status, it is reasonable to assume that the tendency toward part-time enrollment is greater in heavily populated areas. Students interested in re-tooling specific skills, learning new skills to prepare for a career shift while remaining employed full- or part-time, cultural and/or individual enrichment, etc. are more frequently situated in urban environments.

In the State of Washington, most educational delivery is geographically situated in or near to urbanized settings thereby contributing to easy accessibility and part-time enrollment. The exceptions are Washington

TABLE 1.4

Total Enrollment in Institutions of Higher Education by Attendance Status, Sex of Student, Control of of Institution, and State: Fall 1976

	Total Enrollment	Attendance Status		Sex of Student		Control of Institution	
		Full-Time	Part-Time	Men	Women	Public	Private
United States	11,105,923	60.99	39.01	53.09	46.91	78.71	21.29
California	1,800,926	43.58	56.42	53.35	46.65	90.50	9.50
New York	954,815	64.31	35.69	51.74	48.26	58.36	41.64
Texas	623,701	63.55	36.45	55.07	44.93	86.52	13.08
Pennsylvania	473,170	68.07	31.93	53.47	46.53	60.91	39.09
Illinois	605,156	53.50	46.50	51.23	48.77	76.94	23.06
Ohio	445,464	66.85	33.15	53.93	46.07	77.62	22.38
Michigan	483,710	57.92	42.08	52.53	47.47	87.68	12.32
Florida	346,903	57.10	42.90	53.35	46.65	82.57	17.43
New Jersey	290,902	55.47	44.53	50.78	49.22	75.84	24.16
Massachusetts	367,045	67.94	32.06	52.93	47.07	43.09	56.91
North Carolina	247,163	73.28	26.72	53.65	46.35	78.85	21.15
Indiana	220,393	68.96	31.04	54.59	45.41	75.43	24.57
Virginia	235,300	61.87	38.13	49.83	50.17	87.17	12.83
Georgia	169,838	69.74	30.26	52.99	47.01	81.63	18.37
Missouri	223,089	65.39	34.61	54.37	45.63	70.10	29.90
Wisconsin	236,960	67.75	32.25	54.14	45.86	87.26	12.74
Tennessee	181,931	68.69	31.31	53.39	46.61	77.05	22.95
Maryland	210,079	52.24	47.76	48.78	51.22	86.34	13.66
Minnesota	186,221	69.45	30.55	52.12	47.88	79.26	20.74
Louisiana	153,986	72.92	27.08	52.06	47.94	86.59	13.41
Alabama	158,390	70.18	29.82	53.79	46.21	87.82	12.18
WASHINGTON	226,297	61.63	38.37	51.13	48.87	89.88	10.12
Kentucky	127,857	70.60	29.40	51.90	48.10	82.55	17.45
Connecticut	147,629	57.78	42.22	51.55	48.45	62.00	38.00
Iowa	122,494	80.30	19.70	55.08	44.92	68.95	31.05
South Carolina	122,921	74.40	25.60	54.97	45.03	78.97	21.03
Oklahoma	144,535	69.33	30.67	55.53	44.47	86.34	13.66
Colorado	149,045	69.10	30.90	54.99	45.01	90.97	9.03
Mississippi	100,634	74.79	25.21	50.55	49.45	89.02	10.98
Oregon	138,625	60.06	39.94	53.23	46.77	88.64	11.36
Kansas	122,238	65.13	34.87	52.46	47.54	88.88	11.12
Arizona	176,687	49.74	50.26	52.66	47.34	97.24	2.76
Arkansas	68,128	72.45	27.55	51.63	48.37	86.02	13.98
West Virginia	80,775	61.58	38.42	52.22	47.78	86.58	13.42
Nebraska	77,881	68.72	31.28	55.92	44.08	82.37	17.63
Utah	84,563	74.80	25.20	58.03	41.97	64.44	35.56
New Mexico	55,328	64.33	35.67	53.11	46.89	92.23	7.77
Maine	39,393	72.57	27.43	55.06	44.94	74.02	25.98
Rhode Island	60,435	65.85	34.15	55.83	44.17	51.96	48.04
Hawaii	47,644	66.29	33.71	55.09	44.91	92.48	7.52
Idaho	39,563	72.52	27.48	53.09	46.91	80.51	19.49
New Hampshire	38,859	79.20	20.80	56.82	43.18	57.15	42.85
Montana	30,674	77.98	22.02	53.90	46.10	90.04	9.96
District of Columbia	80,839	58.25	41.75	54.55	45.45	17.23	82.77
South Dakota	30,208	81.37	18.63	56.37	43.63	71.65	28.35
North Dakota	30,556	83.24	16.76	54.65	45.35	93.32	6.68
Nevada	32,391	39.23	60.77	60.54	39.46	99.43	.57
Delaware	31,491	63.63	36.37	51.28	48.72	84.89	15.11
Vermont	29,075	78.61	21.39	48.44	51.56	59.29	40.71
Wyoming	18,785	62.41	37.59	52.98	47.02	100.00	0
Alaska	17,338	21.36	78.64	46.71	53.29	98.34	1.66
U. S. Service Schools	17,893	100.00	0	97.54	2.46	100.00	0

Note: States are rank ordered on the basis of population size.

Total enrollment includes students whose programs of study are creditable toward a bachelor's or higher degree and also undergraduate students in one-, two-, or three-year occupational programs which are not chiefly creditable toward a bachelor's degree.

Source: Adapted from a preliminary report released by the U. S. Department of Health, Education, and Welfare, National Center for Education Statistics, "Fall Enrollment in Higher Education by control of Institution and Sex and Attendance Status of Students, all Institutions, Fall 1976", January 1977.

OFM/PEES/P-426
1/78

State University and Central Washington University. The community college system operates 27 campuses and more than 500 off-campus education sites which contribute significantly to the availability of educational services to part-time students. For example, in the Fall of 1976, 58 percent of the students enrolled in academic and occupational programs in community colleges in Washington were taking fewer than ten credit hours. The equivalent for part-time students in the four-year public universities and colleges was approximately 20 percent.

CONCLUSION: The State of Washington has a higher percentage of part-time students than does most other states.

Table 1.4 also shows the distribution of total enrollment by sex in the U. S. as of Fall 1976; 53 percent male and 47 percent female. When comparing this distribution between states, it is observed that there is a modest variation in the percent breakdown from one state to the next. Four states (viz., Alaska, Maryland, Vermont, and Virginia) have a higher percentage of women students than men students, while Nevada and Utah are on the other end of the continuum with 61.5 and 58.0 percent men students respectively. The State of Washington comes close to an even split in male/female enrollment (men students = 51.1 percent and women students = 48.9 percent).

Although trend data are not presented here, it should also be noted that the percentage of higher education enrollment accounted for by women continues to increase in both Washington and the U. S. as a whole. The percentage of women enrolled in higher education in the U. S. increased approximately 2 percent (from 45.0 percent to 46.9 percent) between Fall 1975 and Fall 1976. The corresponding change for the State of Washington increased from 46.7 percent to 48.9 percent.

CONCLUSION: Washington's mix of enrollment by sex of student is more evenly distributed than most other states.

SOURCE OF STUDENTS. Fall 1975 residence and migration data for students

TABLE 1.5
Residence and Migration of College Students by State: Fall 1975

State or Other Area	Students Enrolled[1]	Student residents[2]	Students remaining[3]	MIGRATION OF STUDENTS				
				Out of	Into	Net	Percent Leaving for College	Percent Migrating in for College
1	2	3	4	5	6	7 = 6-5	8 = 5/3	9 = 6/2
United States	11,179,610	10,961,075	9,262,397	1,698,678	1,917,213	218,535[4]	.15	.17
Alabama	164,526	156,900	137,000	19,900	27,526	7,626	.13	.17
Alaska	13,931	17,696	13,102	4,594	829	-3,765	.26	.06
Arizona	174,725	138,111	121,467	16,644	53,258	36,614	.12	.30
Arkansas	65,254	68,462	54,153	14,309	11,101	-3,208	.21	.17
California	1,789,179	1,621,546	1,542,077	79,469	247,102	167,633	.05	.14
Colorado	150,730	131,686	107,257	24,429	43,473	19,044	.19	.29
Connecticut	148,177	177,204	120,283	56,921	27,894	-29,027	.32	.19
Delaware	32,515	32,567	23,275	9,292	9,240	-52	.29	.28
District of Columbia	84,394	40,669	23,966	16,703	60,428	43,725	.41	.72
Florida	340,772	334,222	283,043	51,179	57,729	6,550	.15	.17
Georgia	173,537	165,322	136,266	29,056	37,271	8,215	.18	.21
Hawaii	47,128	46,480	35,551	10,929	11,577	648	.24	.25
Idaho	39,230	36,710	26,828	9,882	12,402	2,520	.27	.32
Illinois	584,122	614,141	513,759	100,382	70,363	-30,019	.16	.12
Indiana	213,755	203,635	165,319	38,316	48,436	10,120	.19	.23
Iowa	122,051	123,796	93,425	30,371	28,626	-1,745	.25	.23
Kansas	119,963	119,150	98,086	21,064	21,877	813	.18	.18
Kentucky	125,364	120,665	102,394	18,271	22,970	4,699	.15	.18
Louisiana	152,307	144,974	128,062	16,912	24,245	7,333	.12	.16
Maine	40,885	40,193	29,768	10,425	11,117	692	.24	.27
Maryland	205,625	223,588	166,819	56,769	38,806	-17,963	.25	.19
Massachusetts	385,019	351,371	286,547	64,824	98,472	33,648	.18	.26
Michigan	496,415	474,271	432,083	42,188	64,332	22,144	.09	.13
Minnesota	182,417	199,832	150,533	49,299	31,884	-17,415	.25	.17
Mississippi	99,953	102,145	88,713	13,432	11,240	-2,192	.13	.11
Missouri	224,167	221,615	185,218	36,397	38,949	2,552	.16	.17
Montana	30,672	32,406	24,532	7,874	6,140	-1,734	.24	.20
Nebraska	74,694	73,165	59,568	13,597	15,126	1,529	.19	.20
Nevada	30,216	30,823	24,228	6,595	5,988	-607	.21	.20
New Hampshire	40,941	35,825	21,685	14,140	19,256	5,116	.39	.47
New Jersey	296,655	395,539	267,966	127,573	28,689	-98,884	.32	.10
New Mexico	52,979	56,242	40,778	15,464	12,201	-3,263	.27	.23
New York	1,007,280	1,067,215	898,256	168,959	109,024	-59,935	.16	.11
North Carolina	254,781	235,974	206,440	29,534	48,341	18,807	.13	.19
North Dakota	29,766	32,565	24,030	8,535	5,736	-2,799	.26	.19
Ohio	437,644	451,360	375,815	75,545	61,829	-13,716	.17	.14
Oklahoma	147,168	137,584	119,014	18,570	28,154	9,584	.13	.19
Oregon	145,152	135,444	114,995	20,449	30,157	9,708	.15	.21
Pennsylvania	470,539	497,919	397,612	100,307	72,927	-27,380	.20	.15
Rhode Island	64,612	57,050	45,132	11,918	19,480	7,562	.21	.30
South Carolina	135,382	134,368	115,828	18,540	19,554	1,014	.14	.14
South Dakota	31,215	31,254	23,553	7,701	7,662	-39	.25	.25
Tennessee	181,863	167,777	143,412	24,365	38,451	14,086	.15	.21
Texas	625,447	594,349	550,751	43,598	74,696	31,098	.07	.12
Utah	87,629	66,240	58,075	8,165	29,554	21,389	.12	.32
Vermont	29,269	22,098	14,836	7,262	14,433	7,171	.33	.49
Virginia	246,241	241,467	188,815	52,652	57,426	4,774	.22	.23
Washington	227,256	224,141	198,472	25,669	28,784	3,115	.11	.13
West Virginia	79,517	74,531	61,186	13,345	18,331	4,986	.18	.23
Wisconsin	241,549	240,571	209,595	30,976	31,954	978	.13	.13
Wyoming	18,027	18,217	12,829	5,388	5,198	-190	.30	.29
U. S. Service Schools[5]	16,975	0	0	0	16,975	16,975	0	0
Outlying areas	109,827	114,952	102,732	12,220	7,095	-5,125		

[1]"Students enrolled" are students enrolled in the state (those remaining plus the inmigrants).

[2]"Student residents" are those with residence in the state, and studying either in or out of the state.

[3]"Students remaining" are students studying in their home state.

[4]The inmigration exceeds the outmigration by the number of students enrolled from outside the United States.

[5]Enrollments in service schools are not included in the state totals in column 2; they are, however, included in the total for the United States. Students enrolled at the service schools are included in column 3 according to their state of residence.

in higher education are reported for each state in Table 1.5.* These data show that (1) most students pursue higher education within their state of residence (i.e., in the U. S. only 15 percent study outside of their state of residence), and (2) there is considerable variation between states in the extent to which nonresident students contribute to total enrollment. For example, in Fall 1975, out-of-state students accounted for 49 percent of the total enrollment in Vermont, but only 6 percent of total enrollment in Alaska.

Table 1.5 contains three interrelated pieces of information which should be considered separately when comparing states: net migration, percent leaving the state for study in another state, and percent of students migrating into the state. In the State of Washington, the net migration of students (+3,115) is low relative to that of other states. As a summary measure, the net effect of migration is to increase total enrollment in Washington by 1.4 percent. Further, a longitudinal study of undergraduate student migration for the fifty states shows that the percent of students migrating to and from the State of Washington has not changed significantly since 1958 (Anderson, 1976).

The percent of students migrating into the state for higher education is calculated by taking the ratio of in-migration to total enrollment in the state. As such, it is a measure of student mix and is useful in assessing the extent to which a state delivers educational services to nonresidents. In Fall 1975, 13 percent of the total enrollment in Washington consisted of out-of-state students. Only six states (viz., Alaska, Illinois, Mississippi, New Jersey, New York, and Texas) reported a smaller percent of total enrollment from out-of-state.

The percent leaving the state for study in another state is calculated by taking the ratio of out-migration to student residents in a state regardless of whether they are studying in- or out-of-state. From this

*The definition of residence has changed over time complicating longitudinal comparisons and analyses. For the 1975 data reported in Table 1.5, residence is "the state in which the individual's most recent secondary or postsecondary experience occurred prior to enrolling at the reporting institutions". This definition is independent of tuition and fee considerations, attendance status (part-time versus full-time), and other particularistic criteria used by separate institutions to establish "legal" residence.

information it is observed that in Fall 1975, 89 percent of the students with Washington State residency were enrolled in institutions of higher education in their home state. Only three states (California, .95; Texas, .93; and Michigan, .91) reported a larger percent of their "student resident" population enrolling in their home state.

It is clear from this information that states vary considerably in their delivery of educational services to students from other states and the extent to which they are affected by out-migration. For example, Washington and New Hampshire have a similar pattern of migration: in-migration slightly exceeds out-migration resulting in a small net gain. Owing to a much smaller enrollment base, however, total enrollment in New Hampshire is significantly affected by student migration, whereas in Washington, migration makes up a much smaller percent of the total enrollment. Utah also shares a similarity with Washington in that a relatively small percent of student residents enroll out-of-state. Unlike Washington, however, total enrollment in Utah is significantly influenced by out-of-state students (e.g., 32 percent of the enrollment is from out-of-state). New Jersey exhibits a fourth pattern; while only ten percent of the total enrollment is from out-of-state, nearly one-third of the student residents of New Jersey enroll in out-of-state institutions.

CONCLUSION: Relative to other states, total enrollment in the State of Washington is not significantly influenced by out-of-state students.

CONCLUSION: Relative to other states, a small percent of students leave the State of Washington to study in other states.

CONCLUSION: The migration of students to and from Washington has not changed appreciably over the past twenty years.

EDUCATIONAL ATTAINMENT. Differences in educational attainment levels from one state to the next are undoubtedly the result of many causes: socio-economic factors, demographic differences in the composition of states, political decisions (e.g., differences in appropriations by state and local governments which result in differences in the availability and/or accessiblity of educational services), and so on. While

it is beyond the scope and intention of this paper to address any of these influences, an examination of differences in educational attainment on a state-by-state basis should enable us to acquire a perspective regarding the quantity of educational services delivered by respective states.

The most recent data that compare educational attainment between states come from the 1970 decennial census. Table 1.6 exhibits percent distributions of years of school completed by persons 25 years old and over for each state and the U.S., as well as median years of school completed. The most striking pattern that emerges from these distributions is the regional variation that exists on the measures of educational attainment. For example, in the southern states (i.e., Alabama, Arkansas, Georgia, Kentucky, Louisiana, Mississippi, South Carolina, North Carolina, Tennessee, and West Virginia) educational attainment is noticeably lower than in the rest of the country. The western region of the country, on the other hand, displays the highest median educational level of any region. In this regard, Washington, Wyoming, Colorado, Nevada, California and Alaska rank 2nd (12.4 years completed) behind Utah (12.5) in median years school completed.

Compared to other states, Washington's educational attainment distribution by "years of school completed" categories is positively skewed. That is, relative to other states there are small percentages of people in the categories "8 years", and relatively large percentages of people in the high school and college categories. In 1970, for example, 63.5 percent of the 25 years old and over population in Washington had completed four years of high school or more. Only four states (viz., Utah, 67.3 percent; Alaska, 66.7 percent; Nevada, 65.2 percent; and Colorado, 63.9 percent) were ranked above the State of Washington. At first blush, this is impressive. Closer analysis, however, indicates that Washington's ranking is significantly influenced by the large percentage of persons in the category "four years high school completed" (i.e., 36.2 percent). If we consider just those categories related to <u>postsecondary educational experience</u>, Washington's rank is 8th in the "1-3 years of college" category, tied for 17th in the "four years of college" category, and 7th in the "five or more years of college" category.

TABLE 1.6

Years of School Completed by Persons 25 years Old and Over, by State: 1970

State	Number of persons 25 years old and over	Percentage Distribution by Years of School Completed											Median Years of School Completed
		Total	No School Years Completed	Elementary School				High School		College			
				1 to 4 years	5 or 6 years	7 years	8 years	1 to 3 years	4 years	1 to 3 years	4 years	5 or more years	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
United States	109,899,359	100.0	1.6	3.8	5.7	4.4	12.8	19.4	31.1	10.6	6.1	4.6	12.1
Alabama	1,808,798	100.0	2.4	8.3	10.	6.5	8.9	21.9	25.9	7.5	5.1	2.7	10.8
Alaska	134,948	100.0	2.5	3.4	3.1	2.3	7.1	14.9	37.7	14.9	7.8	6.4	12.4
Arizona	915,737	100.0	2.5	3.6	4.5	3.2	11.0	17.1	31.6	13.9	6.7	5.9	12.3
Arkansas	1,057,512	100.0	2.1	8.4	8.9	5.6	15.2	19.9	25.6	7.6	4.2	2.5	10.5
California	10,875,983	100.0	1.5	2.8	4.0	2.7	8.8	17.6	32.8	16.4	7.0	6.5	12.4
Colorado	1,141,138	100.0	1.0	2.2	3.1	2.7	11.1	16.1	34.4	14.6	8.5	6.4	12.4
Connecticut	1,685,[illegible]38	100.0	1.8	2.5	4.8	4.1	12.9	17.9	31.7	10.7	7.8	5.9	12.2
Delaware	287,[illegible]95	100.0	1.2	2.6	4.9	4.1	10.5	22.1	31.7	9.8	7.5	5.6	12.1
District of Columbia	423,0[illegible]	100.0	1.2	4.1	6.3	4.6	7.7	20.9	26.2	11.2	8.1	9.7	12.2
Florida	3,967,[illegible]81	100.0	1.6	4.3	6.4	4.1	11.4	19.6	30.7	11.6	6.3	4.0	12.1
Georgia	2,355,81[illegible]	100.0	2.2	8.9	9.3	7.5	8.4	23.2	22.4	9.0	6.1	3.2	10.8
Hawaii	384,843	100.0	3.0	5.3	5.8	2.5	8.2	13.3	35.9	12.0	7.7	6.3	12.3
Idaho	368,912	100.0	.7	1.6	2.6	2.6	14.3	18.7	34.6	15.0	6.2	3.8	12.3
Illinois	6,089,328	100.0	1.2	2.9	4.6	3.7	16.2	18.8	31.9	10.4	6.0	4.3	12.1
Indiana	2,746,414	100.0	.9	2.3	4.1	3.9	15.4	20.5	36.1	8.5	4.5	3.9	12.1
Iowa	1,540,588	100.0	.6	1.3	2.7	3.0	18.5	15.0	38.7	11.1	5.5	3.6	12.2
Kansas	1,225,988	100.0	.7	1.5	2.8	3.1	16.1	15.8	35.8	12.7	6.6	4.8	12.3
Kentucky	1,713,298	100.0	1.7	7.7	8.3	5.9	21.2	16.6	24.1	7.2	4.2	3.0	9.9
Louisiana	1,809,914	100.0	3.9	9.2	10.3	6.4	8.7	19.2	24.7	8.5	5.5	3.6	10.8
Maine	537,823	100.0	.9	1.9	4.0	3.6	15.0	19.8	35.1	11.2	5.5	2.9	12.1
Maryland	2,082,549	100.0	1.1	3.5	7.1	6.1	9.7	20.3	28.5	9.9	7.4	6.6	12.1
Massachusetts	3,142,463	100.0	1.9	2.3	4.8	3.8	9.9	18.9	34.9	11.0	6.8	5.7	12.2
Michigan	4,594,461	100.0	1.1	2.6	4.1	3.7	13.5	22.1	33.7	9.7	5.1	4.3	12.1
Minnesota	1,990,367	100.0	.7	1.7	3.2	3.5	19.4	14.0	34.5	12.0	6.6	4.5	12.2
Mississippi	1,111,789	100.0	2.7	9.7	9.3	5.3	11.7	20.3	23.9	9.0	5.4	2.7	10.7
Missouri	2,602,279	100.0	.9	3.4	4.9	4.6	20.0	17.4	30.6	9.3	5.2	3.8	11.8
Montana	364,508	100.0	.8	2.0	3.1	3.1	16.2	15.7	34.0	14.1	6.9	4.1	12.3
Nebraska	804,623	100.0	.7	1.7	2.8	2.8	17.3	15.4	37.2	12.4	5.7	3.9	12.2
Nevada	265,089	100.0	.6	1.5	2.5	1.9	8.7	19.6	38.9	15.5	6.3	4.5	12.4
New Hampshire	397,681	100.0	.9	1.4	3.5	3.4	15.3	17.8	34.4	12.3	6.9	3.9	12.2
New Jersey	4,056,606	100.0	1.6	3.1	5.8	4.4	13.1	19.5	31.8	8.8	7.0	4.9	12.1
New Mexico	489,623	100.0	3.3	5.6	5.6	3.7	9.4	17.1	30.0	12.5	6.8	6.0	12.2
New York	10,418,555	100.0	2.2	3.1	5.8	3.9	13.0	19.4	31.2	9.6	6.2	5.6	12.1
North Carolina	2,646,272	100.0	2.0	8.0	9.8	8.5	8.8	24.4	21.7	8.4	5.5	2.9	10.6
North Dakota	318,339	100.0	1.0	3.1	4.5	4.4	25.7	11.0	27.6	14.3	5.2	3.2	12.0
Ohio	5,700,317	100.0	1.0	2.5	4.6	3.7	13.4	21.5	35.3	8.7	5.3	4.0	12.1
Oklahoma	1,422,569	100.0	1.2	4.4	5.8	4.7	13.5	18.9	30.0	11.6	5.8	4.3	12.1
Oregon	1,156,024	100.0	.7	1.6	2.8	3.2	13.2	18.5	35.0	13.3	6.4	5.4	12.3
Pennsylvania	6,689,938	100.0	1.4	2.8	5.7	4.5	14.7	20.6	34.5	7.0	5.1	3.7	12.0
Rhode Island	524,082	100.0	2.2	3.2	6.3	5.6	12.9	23.5	29.0	8.0	5.4	4.0	11.5
South Carolina	1,283,837	100.0	2.6	9.5	10.0	7.3	8.7	24.1	20.6	8.3	6.2	2.7	10.5
South Dakota	349,497	100.0	.6	2.1	3.2	3.2	24.8	12.8	31.2	13.6	5.3	3.3	12.1
Tennessee	2,127,946	100.0	1.7	7.8	8.7	5.7	16.1	18.3	25.7	8.2	4.9	3.0	10.6
Texas	5,817,155	100.0	3.0	6.3	7.4	5.4	8.2	22.4	25.1	11.4	6.4	4.5	11.6
Utah	492,337	100.0	.9	1.1	2.0	2.0	7.6	19.2	35.9	17.4	7.6	6.4	12.5
Vermont	232,643	100.0	.8	1.5	3.3	3.2	17.6	16.7	33.0	12.6	7.0	4.5	12.2
Virginia	2,446,082	100.0	1.6	6.0	8.3	8.7	7.6	20.0	25.2	10.3	7.2	5.1	11.7
Washington	1,825,888	100.0	.7	1.5	2.6	2.8	11.4	17.6	36.2	14.5	6.7	6.1	12.4
West Virginia	969,436	100.0	1.6	5.8	8.8	5.6	19.1	17.6	27.6	7.3	4.0	2.8	10.6
Wisconsin	2,329,796	100.0	.9	2.3	4.0	3.7	18.9	15.7	34.8	9.9	5.8	4.0	12.1
Wyoming	175,649	100.0	.8	1.8	2.7	2.4	12.4	17.1	36.2	14.8	7.2	4.6	12.4

NOTE: Because of rounding, percents may not add to 100.0.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Census of Population: 1970, General Social and Economic Characteristics, Series PC(1)-C1. Adapted from U.S. Department of Health, Education and Welfare, National Center for Education Statistics, Digest of Education Statistics, 19[illegible] edition.

OFM/PEES/P-426
1/78

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Therefore, even though Washington's overall educational attainment level is high when compared to other states, part of the reason for this is the large percentage of persons completing four years of high school but not going on to college (36.2 percent). Even so, of the total who completed high school in Washington, 43 percent had pursued some form of postsecondary education compared to 40 percent for the U.S. Similarly, of the 25 years old and over population, 27.3 percent in Washington had experienced some college compared to only 21.3 percent for the U.S.

CONCLUSION: Compared to other states, the State of Washington has a high level of educational attainment.

FACULTY TENURE AND SALARIES. Table 1.7 contains a rank order distribution of states based on the percent of full-time instructional faculty with tenure in public institutions for 1976-77. From this information, it is observed that the State of Washington has the 3rd highest percentage of tenured faculty in public institutions in the U.S. (74.2 percent). Although less than in the public sector, the percentage of tenured faculty in private institutions in Washington (52.8 percent) is also high in comparison to other states. The combined result is that 70.9 percent of all full-time instructional faculty in Washington are tenured which ranks 2nd behind California where 74.7 percent of the full-time instructional faculty are tenured.

Tenure rates, however, vary by institutional type. In 1975-76, for example, the tenure rates in Washington for full-time instructional faculty were as follows: public two-year institutions, 80 percent; regional universities and state college, 72 percent; and public universities, 66 percent (NCES, 1977). State-by-state comparisons which control for institutional type show the percentage of Washington's full-time tenured faculty in community colleges to rank 2nd, regional universities and state college to rank 5th, and the two universities to be tied for 18th among states. These data show that the community colleges have contributed disproportionately to the overall rate of tenure in this state. In part, this is because of the liberal tenure provisions in the statutes that regulate tenure in the community college system.

Although the data are not included in Table 1.7, a second observation concerns the differences in tenure by sex: in the U.S., 63.3 percent of

TABLE 1.7

Rank Order Distribution of Percent of Full-time Instructional Faculty with Tenure by Institutional Control and State, 1976-77

A. Public Institutions		B. Private Institutions		C. All Institutions	
United States	60.8	United States	52.5	United States	58.5
1. California	79.3	1. New Jersey	62.9	1. California	74.7
2. Connecticut	74.5	2. Pennsylvania	59.3	2. WASHINGTON	70.9
3. WASHINGTON	74.2	3. Ohio	58.1	3. Michigan	67.8
4. Michigan	71.4	4. Connecticut	56.9	4. Connecticut	66.4
5. Pennsylvania	70.4	5. New York	56.4	5. Pennsylvania	65.1
6. New Hampshire	69.8	6. Wisconsin	56.2	6. New Jersey	64.4
7. Massachusetts	68.8	7. Illinois	55.9	7. Hawaii	64.3
8. New York	68.1	7. Nebraska	55.9	8. Illinois	63.9
9. South Dakota	67.7	9. Tennessee	53.6	9. Oregon	63.0
10. Illinois	67.3	10. Arizona	53.3	9. Wisconsin	63.0
11. Oregon	65.3	11. Missouri	53.0	11. Utah	62.3
12. New Jersey	64.9	12. Indiana	52.9	12. New York	62.1
12. Hawaii	64.9	13. WASHINGTON	52.8	13. South Dakota	60.7
14. Florida	64.6	14. Iowa	52.0	14. Florida	60.6
15. Wisconsin	64.2	15. Colorado	51.7	15. Louisiana	59.5
16. Rhode Island	62.8	16. Oregon	51.3	16. Massachusetts	57.5
17. Utah	62.7	17. Massachusetts	51.2	17. New Hampshire	57.1
18. Louisiana	61.5	18. California	50.7	18. Montana	56.1
19. Maine	60.8	19. Minnesota	50.3	18. Colorado	56.1
20. North Dakota	59.1	20. Louisiana	49.9	20. North Dakota	55.9
21. Vermont	58.1	20. Alabama	49.9	21. Arkansas	55.6
22. Arkansas	57.4	22. Virginia	49.8	22. Indiana	55.5
23. Montana	57.0	23. North Carolina	49.4	23. Alabama	55.4
24. Colorado	56.9	24. Montana	48.3	24. Maine	55.1
25. Minnesota	56.8	25. West Virginia	48.2	25. Minnesota	54.9
26. Indiana	56.7	25. Maryland	48.2	26. West Virginia	54.2
27. Alabama	56.1	27. Utah	48.1	26. New Mexico	54.2
28. West Virginia	55.5	28. Kentucky	48.0	28. Nebraska	54.0
29. New Mexico	55.2	29. Texas	47.8	29. Maryland	53.8
30. Maryland	55.0	30. South Carolina	46.6	30. Tennessee	53.4
31. Kentucky	54.1	31. Michigan	46.1	31. Kentucky	52.9
32. Nebraska	53.4	32. Hawaii	45.7	32. Rhode Island	52.5
33. Tennessee	53.3	33. Arkansas	44.9	33. Wyoming	52.2
34. Wyoming	52.2	34. Florida	44.5	33. Missouri	52.2
35. Kansas	51.9	34. Georgia	44.5	35. Ohio	52.1
35. Missouri	51.9	36. Maine	43.4	36. Texas	50.3
37. Texas	50.9	37. Oklahoma	43.0	36. Virginia	50.3
38. Virginia	50.4	38. New Mexico	42.9	38. Kansas	50.2
39. Idaho	50.0	39. South Dakota	42.3	39. Nevada	49.9
40. Nevada	49.9	39. Mississippi	42.3	39. Iowa	49.9
41. Ohio	49.5	41. New Hampshire	41.9	41. North Carolina	49.0
42. North Carolina	48.9	42. Kansas	39.2	42. Arizona	48.9
43. Arizona	48.8	43. Vermont	32.1	43. Vermont	47.1
44. Iowa	48.5	44. Rhode Island	25.5	44. Oklahoma	46.8
45. Delaware	48.1	45. Alaska	24.5	45. Delaware	46.0
46. Oklahoma	47.9	46. Delaware	23.6	46. Georgia	43.6
47. Georgia	43.4	47. North Dakota	12.9	47. Idaho	41.1
48. South Carolina	33.5	48. Idaho	4.4	48. South Carolina	36.3
49. Mississippi	28.1	49. Wyoming	0.0	49. Mississippi	29.8
50. Alaska	11.3	50. Nevada	0.0	50. Alaska	12.4
District of Columbia	10.5	District of Columbia	50.4	District of Columbia	40.9
U. S. Service Schools	71.9	U. S. Service Schools	0.0	U. S. Service Schools	71.9

SOURCE: Preliminary data released by the Department of Health Education and Welfare, National Center for Education Statistics, April 1977.
Data for the state of Alaska was not available for 1976-77. Therefore, we have included 1975-76 data for Alaska which is reported in Salaries, Tenure and Fringe Benefits of Full-Time Instructional Faculty in Institutions of Higher Education, 1975-76, published by the U. S. Department of Health, Education, and Welfare, National Center for Education Statistics.

OFM/PEES/P-426
1/78

the full-time male instructional faculty were tenured in 1976-77 compared to only 44.2 percent of the full-time female instructional faculty. The comparable percents for the State of Washington were 74.7 and 56.0 percent respectively. When the rank order distributions of states based on tenure and sex are examined, the State of Washington continues to rank 2nd behind California.

CONCLUSION: Compared to other states, the State of Washington has a high percentage of tenured faculty in both the public and private sector. This holds for both men and women. Tenure rates vary, however, by institutional type.

CONCLUSION: A higher percentage of male faculty are tenured compared to the percentage of female faculty who are tenured.

In response to Senate Resolution 1976-209, the Council for Postsecondary Education (CPE) recently completed a survey of faculty salaries for selected institutions in the U.S. (Report No. 77-16). This resolution directed CPE to develop "appropriate salary survey procedures to separately determine prevailing wage rates for faculty of the four-year institutions of higher education, and of the state community colleges". The resolution also stipulated that the surveys include "information on faculty salaries and fringe benefits for appropriate public institutions in other states which are deemed comparable to Washington institutions in size, complexity and scope of programs". Consequently, the surveys conducted by CPE did not culminate in a state-by-state salary comparison but included selected institutions situated in locations considered comparable to the State of Washington. The results of the CPE study illuminate salary conditions in Washington in relationship to comparable reference groups *for the purposes of determining prevailing wage rates*. The main findings of the study are:

In the research and doctoral granting university survey, both Washington universities were below average on a composite basis (University of Washington 18th and Washington State University 27th out of 30). On a faculty rank-by-rank basis, Washington universities were even farther below average in most cases.

In the comprehensive colleges and universities survey, composite averages of Washington institutions were: The Evergreen State College 7th (out of 31); Central Washington State College 10th; Eastern Washington State College 17th; and Western Washington State College 20th. On a rank-by-rank basis, Washington institutions were again generally lower than their composite average. Salaries at Washington community colleges ranged from 5.6 percent above the survey average to 25.4 percent below the average with a composite system-wide average 8.1 percent lower than the survey average.

Because of major economic differences, the twelve states from the lowest economic quartile were excluded from the CPE survey. This procedure excludes a number of institutions which fall into the lower quartile range of faculty salaries in a national comparison (e.g., Table 1.8 shows that those states excluded from the CPE study had lower mean salaries than the State of Washington). Even so, state-by-state comparison data published by the National Center for Education Statistics (1977) generally agree with the findings of the CPE survey. Table 1.8 contains the mean salaries of full-time instructional faculty in public institutions on a state-by-state basis. The mean salaries for both men ($17,281) and women ($14,734) in the State of Washington on 9-10 month contracts are slightly below the mean values for the U. S. ($17,628 and $14,746 respectively). When states are rank ordered on the basis of mean salary, the State of Washington is 18th for men and 16th for women which leads to a slightly different interpretation than that contained in the CPE study where only comparable institutions rather than states are compared and the State of Washington appears to be ranked rather low.

CONCLUSION: Mean salaries of full-time instructional faculty on 9-10 month contracts in the State of Washington are close to the national average. This holds for both men and women.

Table 1.8 also contains the mean salaries for full-time instructional faculty on 11-12 month contracts. When states are compared with one another on this variable, it is observed that the mean salaries in the State of Washington (i.e., men, $25,274; women, $18,824) are considerably higher than the U. S. averages. When states are ranked on this variable,

TABLE 1.8

Mean Salaries of Full-Time Instructional Faculty (all ranks combined) in Public Institutional Units of Higher Education, by Length of Contract, Sex of Faculty Member and by State or Other Area: Aggregate United States, 1975-76

Public Institutional Units

State or Other Area	9 - 10 Month Contract				11 - 12 Month Contract			
	Men		Women		Men		Women	
	Number (6)	Salary (7)	Number (8)	Salary (9)	Number (6)	Salary (7)	Number (8)	Salary (9)
Aggregate U. S.	166,319	$17,621	55,537	$14,704	36,289	$21,820	11,101	$17,165
50 States and D. C.	164,369	17,628	54,367	14,746	34,828	21,808	11,085	17,170
Alabama	1,834	15,129	941	12,922	977	20,882	361	16,619
Alaska	282	26,247	98	24,759	123	29,169	30	29,734
Arizona	2,826	18,468	827	15,021	400	22,035	71	16,587
Arkansas	1,266	14,979	530	12,265	281	20,496	96	16,102
California	23,600	20,493	7,027	18,315	963	23,395	312	19,568
Colorado	3,332	16,796	808	13,586	459	22,844	103	18,089
Connecticut	2,174	17,987	701	15,041	101	23,911	11	18,328
Delaware	593	17,890	199	14,074	144	20,567	92	16,980
District of Columbia	440	17,630	269	15,038				
Florida	4,788	16,013	1,739	13,679	1,958	19,526	663	15,945
Georgia	3,335	14,968	1,271	12,372	991	21,928	258	16,000
Hawaii	1,041	19,968	380	16,122	144	25,754	57	20,013
Idaho	797	15,471	191	13,296	114	19,546	15	16,816
Illinois	8,820	17,910	3,072	15,273	1,598	21,767	421	17,436
Indiana	3,653	17,638	1,097	14,230	971	24,053	190	16,163
Iowa	1,956	17,092	630	13,809	1,076	20,339	300	14,833
Kansas	2,685	16,167	703	13,084	518	20,834	169	16,673
Kentucky	2,358	16,070	808	13,098	574	22,333	83	17,209
Louisiana	2,777	15,359	1,188	12,510	546	21,030	187	16,033
Maine	810	14,771	196	12,496	86	16,389	22	13,853
Maryland	3,054	17,591	1,422	15,448	608	23,118	225	18,071
Massachusetts	3,791	18,634	1,416	15,077	133	18,363	38	14,988
Michigan	6,800	18,707	1,910	15,678	1,332	25,190	219	19,369
Minnesota	2,029	17,701	524	14,411	884	21,416	241	16,150
Mississippi	1,693	14,671	996	12,302	885	17,588	330	14,111
Missouri	3,375	16,249	1,069	13,636	526	21,512	79	15,924
Montana	858	16,288	178	13,536	47	21,306	8	17,276
Nebraska	1,539	15,552	361	12,658	542	20,092	269	14,165
Nevada	449	17,742	112	15,306	69	21,512	17	16,005
New Hampshire	716	16,095	152	13,425	56	19,147	21	12,789
New Jersey	3,122	17,124	1,447	15,359	218	24,857	67	19,180
New Mexico	1,255	16,935	292	13,828	127	19,551	27	15,637
New York	9,161	19,280	2,903	16,232	6,312	23,294	2,949	19,610
North Carolina	3,595	16,178	1,575	12,553	2,179	16,550	963	13,653
North Dakota	849	15,504	250	13,370	108	20,860	20	17,407
Ohio	6,336	17,770	1,844	14,266	1,143	23,892	222	18,465
Oklahoma	1,909	15,193	686	12,888	784	21,348	178	16,165
Oregon	2,760	17,151	787	14,553	284	24,877	74	16,931
Pennsylvania	6,349	19,133	1,978	16,078	1,568	24,157	392	18,221
Rhode Island	788	17,194	359	14,606	142	22,030	31	15,590
South Carolina	2,385	14,976	898	11,921	271	21,293	70	14,224
South Dakota	622	14,589	163	12,787	161	20,105	17	15,785
Tennessee	3,095	15,773	1,030	12,538	614	18,727	197	14,588
Texas	10,182	16,827	3,776	14,001	1,701	21,286	498	15,487
Utah	1,540	16,865	305	13,424	219	21,596	43	15,309
Vermont	485	15,802	155	12,977	74	20,399	13	15,138
Virginia	4,720	16,210	1,685	13,024	518	23,172	139	18,244
Washington	4,036	17,281	1,130	14,734	486	25,274	122	18,824
West Virginia	1,372	14,926	582	12,580	365	20,901	56	15,906
Wisconsin	5,502	17,357	1,555	15,052	345	21,653	104	16,644
Wyoming	635	16,787	152	13,640	103	20,637	15	17,321
U. S. Service Schools	511	22,882	5	14,875	1,445	22,247	7	18,277

SOURCE: Adapted from the U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty in Institutions of Higher Education 1975-76.

it is observed that the mean salary for the State of Washington is 3rd for men and 7th for women. Obviously, the State of Washington (regardless of socio-economic differences between states) compares quite favorably with other states on this dimension of faculty salaries. Quite possibly this is because some administrative salaries are included in the data (e.g., department heads who also have teaching responsibilities).

CONCLUSION: Mean salaries of full-time instructional faculty on 11-12 month contracts in the State of Washington are considerably higher than the U.S. average. While this holds for men and women, it is especially so for men.

Finally, it is noted from Table 1.8 that mean salaries for women are consistently lower than the mean salaries for men. This apparent inequity corresponds to differences in tenure, longevity of service, and academic rank that are reported for men and women. Although states vary in the magnitude of salary difference between men and women, there is nevertheless a consistent pattern in which the mean salary for women is lower than the mean salary for men.

An analysis of the salary gains made by women from 1974-75 to 1975-76 shows that women on 11-12 month contracts reduced the dollar gap between the salaries of men and women. "In contrast, the salary increases among women on nine to ten month contracts were insufficient at any rank to reduce the dollar gaps that existed between men's and women's salaries in 1974-75" (NCES, 1977).

CONCLUSION: Nationally, substantial differences exist between the mean salaries of men compared to women who have full-time instructional faculty appointments. This holds for the State of Washington.

TUITION AND FEES. Since 1970 the Council for Postsecondary Education has provided state-by-state comparison information on the tuition and fees charged by public universities and colleges (Council for Post-secondary Education, February, 1978). Seven states, (viz., California

Illinois, Indiana, Michigan, Minnesota, Oregon, and Wisconsin) have especially been singled out for comparison purposes with the State of Washington. At the risk of over-simplifying, this information has been summarized in Table 1.9. From this information the following conclusions are reached:

CONCLUSION: Relative to the seven comparison states and the U.S. as a whole, the State of Washington had a lower than average resident tuition and fee charge in 1977-1978. This conclusion holds for the public universities, colleges and state universities. Nonresident tuition and fees, on the other hand, are higher in Washington.

CONCLUSION: Between 1972-77 the resident tuition and fee charges in the State of Washington experienced a smaller percent increase than did the seven comparison states, and the U.S. as a whole. Nonresident tuition and fees in Washington increased substantially more during this time period compared to the seven comparison states and the U.S.

STATE AND LOCAL APPROPRIATIONS FOR HIGHER EDUCATION. A number of factors affect state and local financial support for higher education: population size, enrollment demand and participation rates, level and type of programs (e.g., two year undergraduate and/or graduate), delivery of private education, etc. These differences complicate state-by-state comparisons. Furthermore, higher education has experienced considerable enrollment growth during the past two decades, and it is difficult to determine how much, if any, of this growth was stimulated by increased financial support to institutions.

Regardless of these complexities, specific measures of state and local financial support for higher education have been developed by the Council for Postsecondary Education (Report No. 77-19). For comparative purposes, these measures have been rank ordered for the fifty states and are presented in Table 1.10. Washington is ranked 29th on state and local

TABLE 1.9

SUMMARY OF UNDERGRADUATE TUITION AND/OR REQUIRED FEES
BY INSTITUTIONAL CLASSIFICATION, RESIDENCE AND
AREA, 1972-73 AND 1977-78

	Public Universities			Public Colleges and State Universities		
	Wash.	Seven States[1]	U.S.[2]	Wash.	Seven States	U.S.[3]
Resident:						
Tuition and Fees:						
1972	$ 564	$ 638	$ 549	$ 495	$ 484	$ 465
1977	660	830	720	591	641	602
Difference	$ 96	$ 192	$ 171	$ 96	$ 157	$ 137
Percent Increase	17.02	30.09	31.15	19.39	32.44	29.46
Nonresident:						
Tuition and Fees:						
1972	$1581	$1802	$1428	$1359	$1280	$1159
1977	2394	2492	1909	1983	1767	1490
Difference	$ 813	$ 690	$ 481	$ 624	$ 487	$ 331
Percent Increase	51.42	38.29	33.68	45.92	38.05	28.56

[1]The seven states that are compared to Washington include California, Illinois, Indiana, Michigan, Minnesota, Oregon, and Wisconsin.

[2]Forty-nine states were aggregated for the U.S. averages.

[3]Forty-five states were aggregated for the U.S. averages.

Source: Adapted from "Resident and Nonresident Undergraduate Tuition and/or Required Fees, Public Universities and Public Colleges and State Universities," Council for Postsecondary Education, March, 1977.

OFM/PEES/P-426
4/78

appropriations per "equivalent full-time student" which falls below the national average by $189 per student. By itself, this measure indicates a relatively low level of commitment to higher education in the State of Washington. However, on the third measure, per capita state and local appropriations, Washington appropriates $21.32 per capita more than the national average and ranks 6th among the states---signaling a strong support for higher education. The major reason for the difference in these two rankings is *the high participation rates in higher education in Washington* which result in a fairly substantial per capita appropriation for higher education but a relatively lower amount per full-time student served.

Tax appropriations for higher education as a percent of tax revenue collected, on the other hand, are a direct indicator of commitment to educational need and demand, particularly when competition for tax dollars is intense. In this regard, the State of Washington exceeds the national average by 3.17 percent and ranks 15th among the states in the percentage of tax revenue earmarked for higher education.

CONCLUSION: Relative to other states, the extent of public higher education services provided through state and local tax support in the State of Washington is substantially greater than average.

Comparable state data on expenditures for vocational education are available from the Office of Education for FY 1975.* Actual dollar expenditures, however, mask important differences in support levels as differences in the population size of states affect educational demand and subsequent support and delivery for vocational education. Table 1.11 seeks to avoid this problem by detailing (1) the per capita state and local fund expenditure for vocational education, and (2) the percent state and local funds are of total funds expended for vocational education.

*The expenditures for vocational education are reported to the Office of Education and include both postsecondary and common school expenditures The submittal of these reports is unaudited and it is generally assumed that state and local expenditures are understated.

TABLE 1.10
Rank Order Distributions of Combined State and Local Appropriations for Higher Education, 1976-77

A. Per Equivalent Full-Time Student			B. As a Percentage of Tax Revenue Collected Fiscal 1975			C. On a Per Capita Basis		
Rank	State	Amount	Rank	State	Percent	Rank	State	Amount
1.	Alaska	$8133	1.	Alaska	21.87%	1.	Alaska	$169.71
2.	New York	$3481	2.	Alabama	17.94%	2.	Hawaii	$110.35
3.	Iowa	$3179	3.	South Carolina	17.05%	3.	California	$109.81
4.	Pennsylvania	$3106	4.	Utah	16.87%	4.	Arizona	$ 98.96
5.	Rhode Island	$2902	5.	Idaho	16.58%	5.	Wyoming	$ 97.75
6.	Minnesota	$2892	6.	North Carolina	15.98%	6.	WASHINGTON	$ 92.36
7.	Idaho	$2876	7.	Mississippi	15.52%	7.	Oregon	$ 88.70
8.	Hawaii	$2809	8.	Arizona	15.35%	8.	Kansas	$ 88.22
9.	North Carolina	$2762	9.	Texas	15.06%	9.	Idaho	$ 86.37
10.	South Carolina	$2737	10.	Kansas	15.03%	10.	Wisconsin	$ 85.36
11.	Wyoming	$2713	11.	Nebraska	14.85%	11.	Nebraska	$ 85.32
12.	Nebraska	$2679	12.	Wyoming	14.63%	12.	Utah	$ 83.82
13.	Indiana	$2518	13.	Oregon	14.22%	13.	Colorado	$ 81.96
14.	Illinois	$2503	14.	New Mexico	13.99%	14.	Minnesota	$ 81.60
15.	Kansas	$2497	15.	WASHINGTON	13.93%	15.	New York	$ 81.08
16.	Georgia	$2491	16.	Arkansas	13.40%	16.	Iowa	$ 80.63
17.	Alabama	$2467	17.	Hawaii	13.27%	17.	North Dakota	$ 78.28
18.	Wisconsin	$2463	18.	Colorado	13.25%	18.	North Carolina	$ 77.30
19.	Arkansas	$2461	19.	North Dakota	12.92%	19.	Delaware	$ 77.20
20.	California	$2396	20.	California	12.84%	20.	Texas	$ 76.05
21.	Kentucky	$2394	21.	Iowa	12.65%	21.	New Mexico	$ 75.30
21.	New Jersey	$2394	22.	West Virginia	11.92%	22.	South Carolina	$ 75.17
23.	Texas	$2363	23.	Oklahoma	11.90%	23.	Alabama	$ 73.37
24.	Oregon	$2362	24.	Kentucky	11.88%	24.	Rhode Island	$ 69.87
25.	Utah	$2348	25.	Wisconsin	11.87%	25.	Nevada	$ 69.44
25.	Maryland	$2348	26.	Virginia	11.30%	26.	Maryland	$ 69.00
27.	Connecticut	$2269	27.	Minnesota	10.93%	27.	Mississippi	$ 68.97
28.	West Virginia	$2247	28.	Rhode Island	10.84%	28.	Illinois	$ 68.16
29.	WASHINGTON	$2242	29.	Delaware	10.67%	29.	Michigan	$ 68.02
30.	New Mexico	$2239	30.	Tennessee	10.64%	30.	Montana	$ 64.07
31.	Nevada	$2223	31.	Georgia	10.61%	31.	West Virginia	$ 62.86
32.	Florida	$2210	32.	Montana	10.54%	32.	Virginia	$ 62.81
33.	Missouri	$2191	33.	Indiana	10.46%	33.	Indiana	$ 60.79
34.	Mississippi	$2172	34.	Missouri	10.36%	34.	Kentucky	$ 58.49
35.	Delaware	$2171	35.	South Dakota	10.35%	35.	Pennsylvania	$ 57.59
36.	Virginia	$2145	36.	Louisiana	10.01%	36.	Oklahoma	$ 56.20
37.	Michigan	$2081	37.	Florida	9.98%	37.	Louisiana	$ 55.97
38.	South Dakota	$2059	38.	Michigan	9.92%	38.	South Dakota	$ 55.95
39.	Montana	$2034	39.	Maryland	9.59%	39.	Arkansas	$ 54.50
40.	Massachusetts	$2001	40.	Illinois	9.40%	40.	Missouri	$ 54.02
41.	Arizona	$1994	41.	Nevada	9.29%	41.	Georgia	$ 53.43
42.	North Dakota	$1992	42.	Pennsylvania	9.08%	42.	Florida	$ 51.64
43.	Ohio	$1985	43.	Ohio	9.07%	43.	New Jersey	$ 49.60
44.	Colorado	$1981	44.	New York	7.89%	44.	Ohio	$ 48.70
45.	Louisiana	$1978	45.	Maine	6.98%	45.	Tennessee	$ 47.67
46.	Tennessee	$1916	46.	New Jersey	6.86%	46.	Connecticut	$ 46.80
47.	Maine	$1866	47.	Connecticut	6.76%	47.	Massachusetts	$ 41.32
48.	Oklahoma	$1577	48.	Vermont	6.02%	48.	Vermont	$ 41.66
49.	Vermont	$1428	49.	New Hampshire	5.32%	49.	Maine	$ 39.50
50.	New Hampshire	$1227	50.	Massachusetts	5.06%	50.	New Hampshire	$ 27.81
	National Average	$2431		National Average	10.76%		National Average	$ 71.04

SOURCE: Adapted from Report #77-19 "Financial Support of Higher Education in Washington: A National Comparison", Council for Postsecondary Education, State of Washington.

OFM/PEES/P-426
1/78

Table 1.11 indicates that much of the support for vocational education comes from state and local funds: the national average shows that 86.7 percent of the total funds are from state and local sources. The State of Washington ranks 4th among the states on this measure with 92.3 percent of support coming from state and local funds. Table 1.11 also indicates that the State of Washington has the 3rd highest per capita expenditure of state and local revenue for vocational education (i.e., $27.47 per capita).

CONCLUSION: Nationally, as well as in the State of Washington, vocational education is primarily supported by state and local funds.

CONCLUSION: The State of Washington's support levels for vocational education are among the highest in the nation.

SUMMARY

This chapter has presented a series of tables and charts detailing state level information on selected enrollment-related variables. Provided certain precautions are taken this information is a useful beginning in assessing the condition of postsecondary education in Washington relative to the other 49 states and the U.S. The conclusions that emerge from these comparisons are highlighted throughout the chapter and are not repeated here. In general, the State of Washington compares favorably to other states in delivering educational services to its citizens.

TABLE 1.11

Rank Order Distribution of Combined Expenditures of State and Local Funds for Vocational Education, Fiscal Year 1975

	A. State and Local Funds as a Percent of Federal, State, and Local Funds		B. State and Local Fund Expenditures Per Capita Population	
	United States	86.7		
1.	Maryland	94.8	Massachusetts	$29.79
2.	New York	93.9	Tennessee	$27.85
3.	Massachusetts	93.0	WASHINGTON	$27.25
4.	WASHINGTON	92.3	South Carolina	$26.63
5.	Texas	92.1	North Carolina	$26.11
6.	Florida	91.6	Florida	$25.33
7.	Minnesota	91.2	New York	$24.99
8.	South Carolina	90.2	Minnesota	$21.98
9.	North Carolina	90.1	Wisconsin	$19.76
10.	Wisconsin	89.9	Rhode Island	$19.01
11.	Illinois	89.7	California	$17.56
12.	Tennessee	88.6	Maryland	$17.15
13.	Ohio	86.9	Delaware	$17.02
14.	Michigan	86.7	Utah	$17.02
15.	Delaware	86.2	Iowa	$16.31
16.	Iowa	85.6	Virginia	$15.70
17.	Connecticut	85.5	Pennsylvania	$15.63
18.	Pennsylvania	85.3	Colorado	$15.41
19.	Virginia	84.6	Alaska	$15.36
20.	Colorado	84.5	Vermont	$15.12
21.	Rhode Island	84.0	Illinois	$14.03
22.	Mississippi	83.9	Oklahoma	$13.79
23.	Missouri	82.7	Mississippi	$13.74
24.	California	82.6	Wyoming	$13.58
25.	Vermont	82.0	Ohio	$12.88
26.	Oklahoma	81.0	Texas	$12.79
27.	Alaska	80.3	Connecticut	$12.67
27.	New Mexico	80.3	Michigan	$12.48
29.	Wyoming	79.6	West Virginia	$12.18
30.	Georgia	79.3	Arkansas	$11.71
31.	New Jersey	79.2	Missouri	$11.28
31.	Utah	79.2	North Dakota	$11.23
33.	Arizona	79.0	Georgia	$10.88
34.	Arkansas	78.9	Idaho	$10.79
35.	Nevada	78.5	Montana	$10.43
36.	West Virginia	78.4	New Mexico	$10.41
37.	Kentucky	77.4	Alabama	$10.38
38.	Alabama	76.7	Arizona	$10.36
39.	Idaho	76.6	New Hampshire	$10.26
40.	New Hampshire	76.5	Louisiana	$10.12
41.	Kansas	76.4	Kentucky	$10.02
41.	Nebraska	76.4	Oregon	$ 9.74
43.	Montana	75.8	Maine	$ 9.25
44.	Maine	75.5	Nebraska	$ 9.25
45.	North Dakota	75.3	South Dakota	$ 9.23
46.	Louisiana	74.7	Kansas	$ 8.79
47.	Hawaii	74.2	Hawaii	$ 8.37
48.	Oregon	73.1	New Jersey	$ 8.17
	District of Columbia	68.9	Nevada	$ 5.80
49.	South Dakota	68.0	Indiana	$ 4.75
50.	Indiana	66.1	District of Columbia	$ 3.63

SOURCE: Derived from Table 148 -- Expenditures of Federal, State, and Local Funds for Vocational Education, by State: Fiscal Year 1975 in Digest of Education Statistics, U.S. Department of Health, Education and Welfare, National Center for Education Statistics.

NOTE: Population estimate used to derive "State and Local Fund Expenditures per Capita Population" is July 1, 1975.

OFM/PEES/P-426
1/78

CHAPTER TWO

HIGHER EDUCATION ENROLLMENT GROWTH IN WASHINGTON: RECENT TRENDS

CHAPTER TWO

HIGHER EDUCATION ENROLLMENT GROWTH IN WASHINGTON: RECENT TRENDS

The State of Washington has made available diverse educational services to the citizens of the state. The institutions providing these services are described in terms of location, history, organizational structure, mission, roles, activities and current enrollment characteristics in Appendix A.* The intention of this chapter is to supplement these descriptions with statistical analyses of enrollment growth patterns since 1971.

In recent years a number of conditions in the U.S. (e.g., disillusionment with higher education, the end of the draft and Vietnam War, a depressed job market, a shifting age structure, etc.) have altered the composition of client groups attending postsecondary educational institutions. In particular, the mix of students on characteristics such as age, sex, ethnicity and attendance status has undergone change. National trends have witnessed higher percentages of students who are female, older, of minority status and from lower socio-economic backgrounds in the 1970's. Consequently, institutions have been faced with the challenge of making their programs more flexible and accessible to "non-traditional" students; for example, greater utilization of part-time adjunct faculty; class offerings on the weekend, early morning and evening; programmatic changes emphasizing retraining and career shifts; etc.

Such changes, however, have not been constant across all sectors of postsecondary education. Thus, if we are to understand the demand for postsecondary educational services in the future, it is critical that assumptions regarding this future be based on historical data which underscore these trends within the particular institutions and sectors of postsecondary education. In addition to forecasting future enrollment, historical trend data of this nature is essential information that relates to (1) evaluating the extent to which the state is accomplishing

*The descriptions in Appendix A were provided by each of the institutions with editorial changes by OFM. For an excellent description of postsecondary education in Washington the following book by Dr. William Chance, Council for Postsecondary Education, should be consulted: Planning and Policy Recommendations for Washington Postsecondary Education: 1976-1982, (May 1976), pp. 122-163.

its goals in postsecondary education--responsiveness, access, diversity and coordination, and (2) detailing specific issues that emerge as consequences of changing enrollment patterns for which state policies may be required.

HEADCOUNT ENROLLMENT GROWTH. Figure 2.1 presents the data necessary to assess headcount enrollment growth since 1970 in three distinct sectors of postsecondary education: the community colleges, the four-year public college and universities, and the four-year private colleges and universities. Although individual institutions vary from the aggregate growth patterns described below, the following general observations are pertinent to state level considerations of changing enrollment.

First, although the growth experienced in this decade is not as extraordinary as the enrollment growth experienced in the 1960's, the overall pattern has been one of continued enrollment growth in higher education in this state. The average annual growth rate for the state has been 4.67 percent since 1970. Partitioning this growth by sector shows that community colleges experienced the highest annual average growth (6.80 percent) followed by the private colleges and universities (2.41 percent) and the four-year public college and universities (1.69 percent). Since 1973 the four-year public college and universities have experienced a resurgence in enrollment growth averaging a 2.63 percent growth annually while the growth rate in the community colleges decreased to 5.70 percent annually. The four-year private colleges and universities have experienced for the first time this decade two consecutive years of enrollment decline--1976 and 1977.

This overall slow down in the enrollment growth rate in Washington conforms to the national trend, which shows the 1965-70 annual average growth rate to be 7.7 percent compared to a 4.4 percent annual average between 1970-76 (Fink, 1977). Since 1970, then, there has been a slower but steady increase in enrollment nationally (4.4 percent) and in the State of Washington (4.7 percent). Figures 2.2 and 2.3 illustrat graphically this slow down in enrollment growth rates for Washington from 1970 to the present. Apart from the enrollment decline that occurred in 1976 (a decline that occurred nationally as well as in the state and is due, in part, to a significant decline in veteran enrollment) the overall enrollment pattern since 1970 has been steady but slower growth.

Second, the bar chart in Figure 2.1 illustrates the growth of the community colleges relative to other higher education delivery systems in the state. In the late 1960's significant growth and expansion in the community college sector occurred. The data for the 1970's indicate that headcount enrollment has continued to expand more rapidly in the community college sector compared to the four-year public and private sectors: community colleges accounted for 54 percent of total headcount enrollment in 1970 and 62 percent in 1977.

By itself, however, headcount enrollment growth oversimplifies educational delivery as it ignores the attendance status of students (i.e., full-time versus part-time attendance). For example, as an indicator of enrollment growth, headcount enrollment measures the total number of students participating in higher education. Since community college students are more likely to be part-time participants, however, *the total magnitude of educational delivery is partially masked when looking at just headcount enrollment.* Because of this shortcoming, a common convention is to link headcount enrollment to student credit hours and construct a full-time equivalent (FTE) measure of enrollment.* A comparison of FTE enrollment with headcount enrollment illustrates this point. The partitioning of total FTE enrollment for Fall, 1976 shows that the community colleges accounted for only 48 percent of total FTE enrollment but 59 percent of headcount enrollment; the public four-year college and universities accounted for 40 percent of FTE enrollment but only 32 percent of headcount enrollment; and the private four-year colleges and universities accounted for 12 percent of FTE enrollment and 10 percent of headcount enrollment. This comparison is summarized in Table 2.1.

Finally, it is worth noting that the above analysis is not a complete description of postsecondary education enrollment in Washington. Because of (1) noncomparable data elements, (2) a lack of reliable historical data and (3) certain data deficiencies, the five vocational-technical institutes and the numerous proprietary schools were excluded. Table 2.2 presents the only available data on headcount enrollment in the

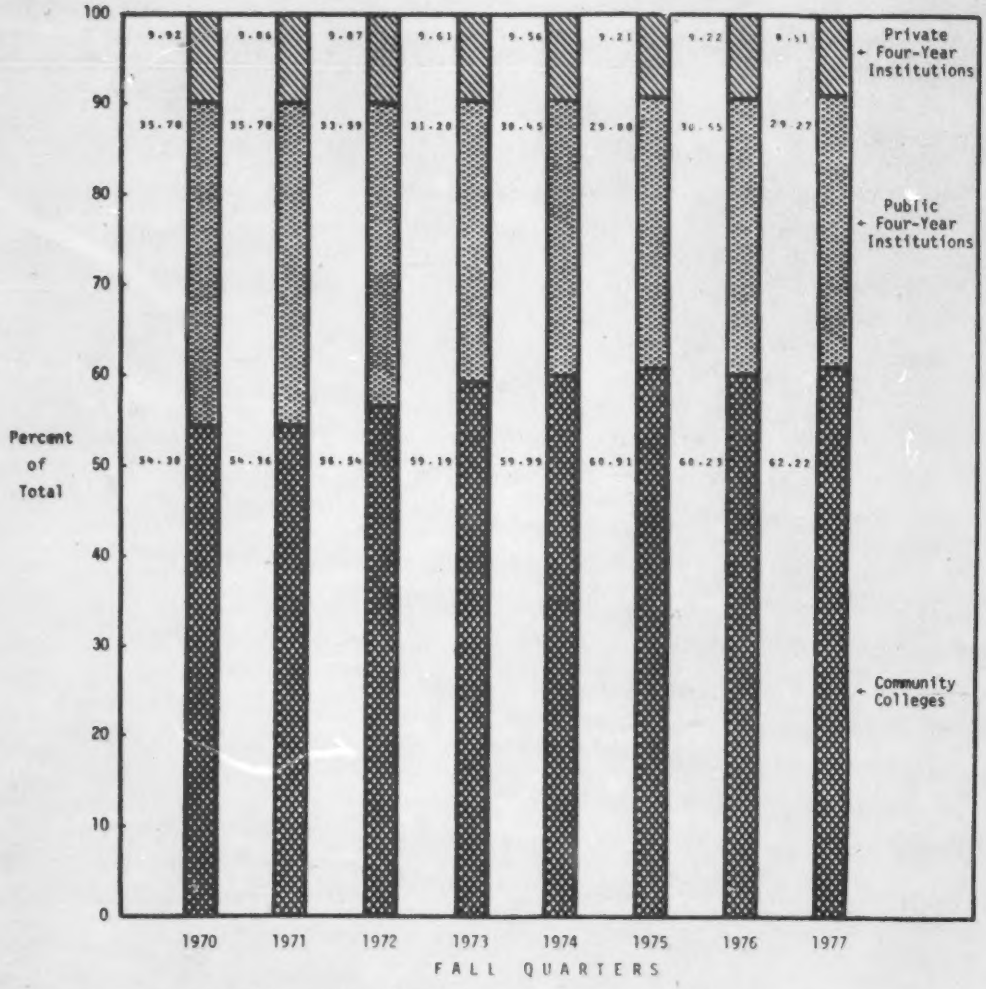
*The FTE convention used in Washington is as follows: 15 student credit hours at the undergraduate level equals one full-time equivalent student while 10 student credit hours at the graduate level equals one full-time equivalent student.

FIGURE 2.1

FALL HEADCOUNT ENROLLMENT IN COMMUNITY COLLEGES[1], PUBLIC FOUR-YEAR, AND PRIVATE FOUR-YEAR INSTITUTIONS AS A PERCENT OF STATEWIDE ENROLLMENT, 1970-1977[2]

FALL HEADCOUNT ENROLLMENT

	COMMUNITY[1] COLLEGES	FOUR-YEAR PUBLIC	FOUR-YEAR PRIVATE	TOTAL
1970	108,679	71,628	19,853	200,160
1971	110,979	73,051	20,132	204,162
1972	122,859	72,988	21,440	217,287
1973	137,663	72,563	22,340	232,566
1974	146,784	74,519	23,385	244,688
1975	159,386	78,182	24,086	261,654
1976	154,564	78,400	23,667	256,631
1977	170,952	80,425	23,389	274,766



[1] 8th Day counting methodology: 1970-75; Rolling 10th Day counting methodology: 1976-77. Enrollments include academic, occupational, and community service students.

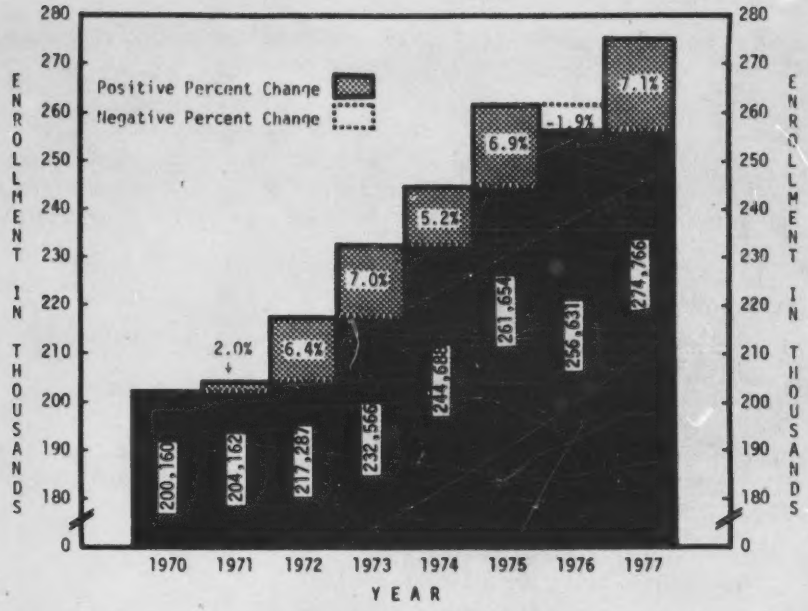
[2] 1977 enrollment for Private Four-Year Institutions is estimated.

SOURCE: Higher Education Enrollment Forecasts for 1977-79 Biennium Budget; Community College Factbook.

OFM/PEES/P-426
12/77

FIGURE 2.2

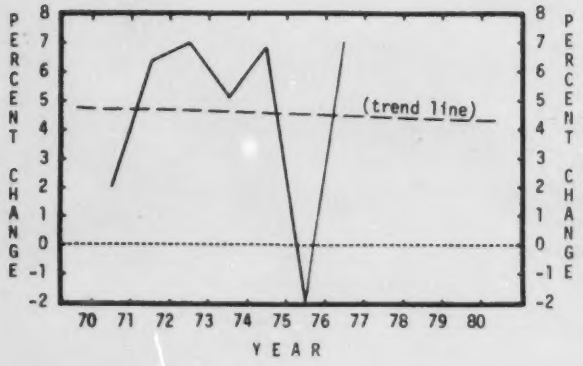
FALL HEADCOUNT ENROLLMENT LEVELS
AND PERCENTAGE CHANGES IN HIGHER EDUCATION
STATE OF WASHINGTON, 1970-1977



Note: Enrollment figures include community colleges, four-year public, and four-year private institutions.

FIGURE 2.3

PERCENTAGE CHANGE IN ENROLLMENT
IN HIGHER EDUCATION
STATE OF WASHINGTON, 1970-1977



PERCENT CHANGE FROM PREVIOUS YEAR

	COMMUNITY COLLEGES	FOUR YEAR PUBLIC	FOUR YEAR PRIVATE	TOTAL
1971	2.1	2.0	1.4	2.0
1972	10.7	(0.1)	6.5	6.4
1973	12.0	(0.6)	4.2	7.0
1974	6.6	2.7	4.7	5.2
1975	8.6	4.9	3.0	6.9
1976	(3.0)	0.3	(1.7)	(1.9)
1977	10.6	2.6	(1.2)	7.1

OFM/PEES/P-426
12/77

Table 2.1

Headcount Enrollment (Fall, 1976) Compared to FTE Enrollment (Annual Average 1976-77).

Colleges and Universities:	Fall Headcount Enrollment	Percent	Annual Average FTE Enrollment	Percent
Community Colleges	145,962	58.8	86,746	47.8
Public Four-Year	78,400	31.6	72,966	40.2
Private Four-Year	23,667	9.6	21,745	12.0
Total	248,029	100.0	181,457	100.0

Note: FTE enrollment includes summer quarter for the community colleges but not for the four-year institutions. FTE enrollment for the four-year private schools is estimated.

VTI's for each fiscal year beginning with 1972-73.* These data indicate a relatively substantial growth in the VTI's, particularly in the supplemental program area; the average annual rate of growth is 11.09 percent.

Enrollment growth in the proprietary schools is more difficult to assess. Apart from a special survey conducted in 1975 (Walker and Lux), there are no agencies collecting and analyzing enrollment data for the proprietary sector. Consequently, a telephone survey was conducted among a sample of proprietary schools that participated in the 1975 survey and it was found that headcount enrollment had increased 14.3 percent since 1975. An average annual growth rate of 7 percent is slightly higher than what has occurred in higher education but somewhat lower than the 11 percent reported by the VTI's.

*Inconsistencies in existing data reports are such that the enrollment reported in Table 2.2 contain some duplicated headcount enrollment. Consequently these data are not compatible with data for the rest of postsecondary education.

Table 2.2

Enrollment in Vocational-Technical Institutes
By Program, FY1972-73 through 1976-77

Year:	Preparatory	Supplemental	Apprenticeship	Total
1972-73	11,286 (.26)	29,208 (.68)	2,385 (.06)	42,879
1973-74	13,143 (.28)	30,894 (.67)	2,400 (.05)	46,437
1974-75	15,311 (.29)	34,308 (.65)	2,876 (.05)	52,495
1975-76	15,693 (.28)	37,693 (.67)	3,042 (.05)	56,428
1976-77	16,323 (.25)	46,716 (.72)	2,151 (.03)	65,190

Note: Enrollment count is an unduplicated headcount during the Fiscal Year.

Source: "Enrollment in Vocational Education Programs," (OE Form 346-3) submitted annually to HEW by the Commission for Vocational Education, State of Washington.

NEW ENROLLMENT PATTERNS

Age. One of the most significant changes in the composition of higher education enrollment this decade is the shift in the age structure of college students. This holds nationally (Stampen, 1976) as well as for the State of Washington. Attitudes toward education appear to be changing and social conditions now enable older persons who were previously precluded from participation to attend college. Continuing education, adult education and "life-long learning," although once viewed with disdain by many university regulars, have suddenly been discovered as the wave of the future (Hechinger, 1975; Brunner, 1976; and Kurland, 1976).

Table 2.3 summarizes the changes in the age structure for Fall headcount enrollment in Washington from 1971 to the most recent available information point. The percent that each age category is of the total for each year has been calculated in order to illustrate the changing age mix over time. Table 2.4 has been included in order to show the percent change in Fall headcount enrollment for each age category using 1971 as the base year. Figures 2.4 and 2.5 graphically illustrate this growth by age categories for the community colleges and the four-year public college and universities.

Table 2.3

Change in Headcount Enrollment by Age and Type of Institution, Fall Quarters 1971 through 1977

	AGE					
	19 and Below	20-21	22-24	25-29	30 and Above	TOTAL
Institutional Type:	Headcount (%)	Headcount (%)	Headcount (%)	Headcount (%)	Headcount (%)	Headcount (%)
Community Colleges:						
1971	31,483 (30.8)	11,996 (11.7)	14,539 (14.2)	15,123 (14.8)	29,223 (28.6)	102,364 (100.0)
1972	29,288 (25.2)	12,729 (11.0)	14,904 (12.8)	18,799 (16.2)	40,556 (34.9)	116,276 (100.0)
1973	31,156 (23.8)	15,210 (11.6)	16,532 (12.6)	21,813 (16.6)	46,448 (35.4)	131,159 (100.0)
1974	28,735 (20.7)	17,208 (12.4)	17,489 (12.6)	25,273 (18.2)	49,878 (36.0)	138,583 (100.0)
1975	29,542 (19.9)	17,644 (11.9)	19,129 (12.9)	27,766 (18.7)	54,530 (36.7)	148,611 (100.0)
1976	29,421 (20.2)	18,371 (12.6)	19,842 (13.6)	27,102 (18.6)	51,226 (35.1)	145,962 (100.0)
1977	29,507 (18.5)	19,241 (12.1)	20,697 (13.0)	29,397 (18.4)	60,505 (38.0)	159,347 (100.0)
Public Four-Year College and Universities:						
1971	19,636 (26.9)	21,514 (29.5)	14,671 (20.1)	10,554 (14.4)	6,575 (9.0)	73,051 (100.0)
1972	18,569 (25.4)	21,128 (28.9)	14,554 (19.9)	11,574 (15.9)	7,009 (9.6)	72,988 (100.0)
1973	17,766 (24.5)	20,215 (27.9)	14,965 (20.6)	11,933 (16.4)	7,490 (10.3)	72,563 (100.0)
1974	17,564 (23.6)	19,912 (26.7)	15,668 (21.0)	12,475 (16.7)	8,693 (11.7)	74,519 (100.0)
1975	17,683 (22.6)	19,906 (25.5)	16,506 (21.1)	13,499 (17.3)	10,357 (13.2)	78,182 (100.0)
1976	17,268 (22.0)	19,619 (25.0)	16,817 (21.5)	13,303 (17.0)	10,978 (14.0)	78,400 (100.0)
1977	18,384 (22.9)	19,856 (24.7)	16,803 (20.9)	13,329 (16.6)	11,702 (14.6)	80,425 (100.0)
Private Four Year Colleges & Universities:						
1971	N/A	N/A	N/A	N/A	N/A	20,132 (100.0)
1972	6,829 (31.9)	5,957 (27.8)	2,898 (13.5)	2,439 (11.4)	3,174 (14.8)	21,441 (100.0)
1973	6,828 (30.6)	6,048 (27.1)	3,394 (15.2)	2,798 (12.5)	3,266 (14.6)	22,340 (100.0)
1974	6,807 (29.1)	6,019 (25.7)	3,581 (15.3)	3,308 (14.1)	3,642 (15.6)	23,385 (100.0)
1975	6,936 (28.8)	6,066 (25.2)	3,720 (15.4)	3,360 (14.0)	3,980 (16.5)	24,086 (100.0)
1976	6,858 (29.0)	5,972 (25.2)	3,636 (15.4)	3,240 (13.7)	3,880 (16.4)	23,667 (100.0)
1977	N/A	N/A	N/A	N/A	N/A	N/A

Note: N/A means not available. Percents may not add to total because of rounding; the "age not indicated" category is not shown for the four-year college and universities but is included in the total headcount; adjusted rolling 10th day counting methodology for the community colleges, acedemic and vocational only.

Source: Higher Education Enrollment Reports, Office of Financial Management; Community College Factbook, SBCCE.

OFM/PEES/P-426
4/78

Several observations are based on the data and analysis in these tables and figures. *First, community colleges are currently more involved in education for older students (both numerically and as a percent of the total) while the four-year institutions are more characterized by "traditional college age students".* For example, in the four-year institutions, 70 percent of the students are under the age of 24 (includes graduate as well as undergraduate enrollment) whereas in the community colleges approximately 45 percent are under the age of 24. Furthermore, in comparing the older age categories, the 25-29 year old group experienced a significantly greater increase in the community colleges than in the four-year public institutions (see Figures 2.4 and 2.5). Gains in the "30 and over" category were also higher in the community colleges although not appreciably.

Table 2.4

PERCENT CHANGE IN FALL ENROLLMENT BY AGE
WITH YEAR 1971 AS A BASE, 1972 - 1977

	AGE				
	19 & Under	20-21	22-24	25-29	30 & Over
Community Colleges:					
1972	-6.97	6.11	2.51	24.31	38.78
1973	-1.04	26.79	13.71	44.24	58.94
1974	-8.73	43.45	20.29	67.12	70.68
1975	-6.17	47.08	31.57	83.60	86.60
1976	-6.55	53.14	36.47	79.21	75.29
1977	-6.28	60.40	42.36	94.39	107.05
Four-Year Public College & Universities:					
1972	-5.43	-1.79	-0.80	9.66	6.60
1973	-9.52	-6.04	2.00	13.07	13.92
1974	-10.55	-7.45	6.80	18.20	32.21
1975	-9.95	-7.47	12.51	27.90	57.52
1976	-12.06	-8.81	14.63	26.05	66.97
1977	-6.38	-7.71	14.53	26.29	77.98

Source: Higher Education Enrollment Reports, OFM; MIS-1 Student Enrollment Report, SBCCE.

FIGURE 2.4
PERCENT CHANGE IN FALL HEADCOUNT ENROLLMENT, BY AGE
(Community Colleges, 1971-77)

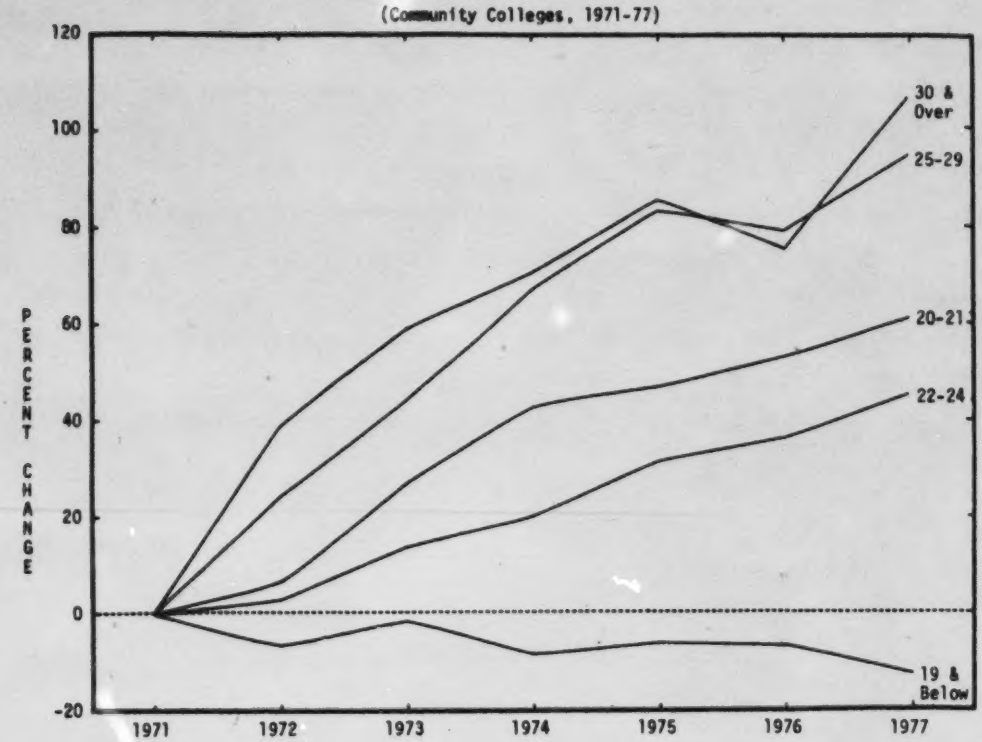
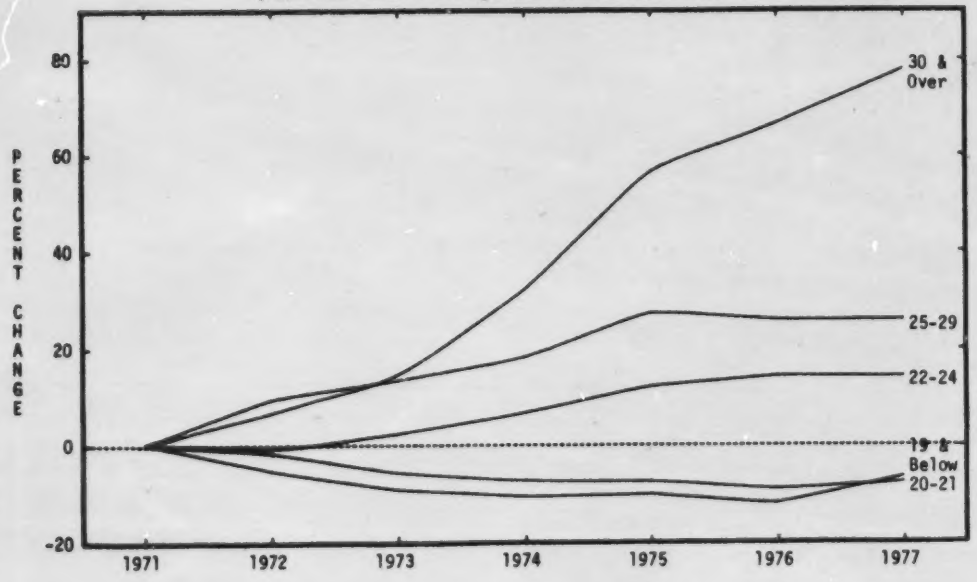


FIGURE 2.5
PERCENT CHANGE IN FALL HEADCOUNT ENROLLMENT, BY AGE
(Four-Year Public College and Universities, 1971-77)



OFM/PEES/P-426
4/78

Second there has been a slight decline (approximately 7.6 percent for the three sectors of higher education combined) in the percent of students below the age of twenty between 1971-76. While some of this decline is due to a smaller pool of high school graduates in the state (a decline of approximately one percent during this time period) it is obvious that other factors are also at work: disillusionment with the value of a college education, the trend for high school graduates to delay entrance into postsecondary education, elimination of the draft, an increasing number of alternatives, etc., are some of the reasons for this decline.

Third, a corollary to the above is the observation that the absolute number of students in the younger age categories has remained fairly stable in recent years while the older categories have grown significantly in size. The implications of the "changing mix" at the institutional level is for the continuation of delivery aimed at the "traditional" age cluster while simultaneously expanding and creating flexible delivery systems suitable to older clientele groups. Because of the differential rates of growth by age categories, the impact of a changing age structure will be felt unevenly across institutions. Obviously, the changing mix of students by age and the subsequent expansion of suitable delivery systems for older students (i.e., off-campus, extension, outreach, evening, early morning and weekend classes, etc.) presents a number of important issues for which state policy may be needed if the state is to effectively deal with enrollment change in the future: for example, effective utilization of capital facilities, expansion of capital facilities, program review, staffing ratios and the use of part-time adjunct faculty.

Fourth, it is observed that much of the community college growth that occurred in the 25 and over age categories took place in the first part of the decade (i.e., 1971-73). Growth has been slowing down in these age categories and in 1976 a decline in enrollment was experienced for the first time. Fall, 1977 academic/vocational enrollment data in the community college system, however, indicate an enrollment growth of 13,385 of which 69.3 percent (9,279) of the growth consists of students 30 years or older. The corresponding growth for those over 25 in the four-year colleges and universities has been more even over the decade and appears to have peaked in 1974 and 1975.

Finally, it should be noted that the mix of students by age has changed more in the public sector than in the private sector, particularly for the over age 30 category. The private colleges and universities, however, have also experienced the trend toward older students during the 70's.

Sex. Current enrollment growth in higher education shows that female enrollment is increasing more rapidly than male enrollment. Over the past decade (i.e., 1965-66 to 1975-76) male enrollment in the U.S. increased 69.4 percent while female enrollment increased 119.8 percent (The Chronicle of Higher Education, 1977). In a national survey conducted by the U.S. Department of Commerce (1977) it was found that "from 1975 to 1976, the number of women 14 to 34 years old enrolled in college increased by about 300,000 while no significant change in enrollment could be detected for men". This finding conforms to Maggarell's (1977) observation from national enrollment data collected by the NCES that the .7 percent decline in Fall, 1976 enrollment varied by sex of student: female enrollment increased 3.4 percent while male enrollment *decreased* 4.0 percent. The larger decline in male enrollment contributed to a net loss in enrollment for the first time since 1951. Preliminary Fall, 1977 enrollment data indicate a continuation of this trend: 93 percent of the enrollment gain this past year is accounted for by increases in women students (Magarrell, 1978).

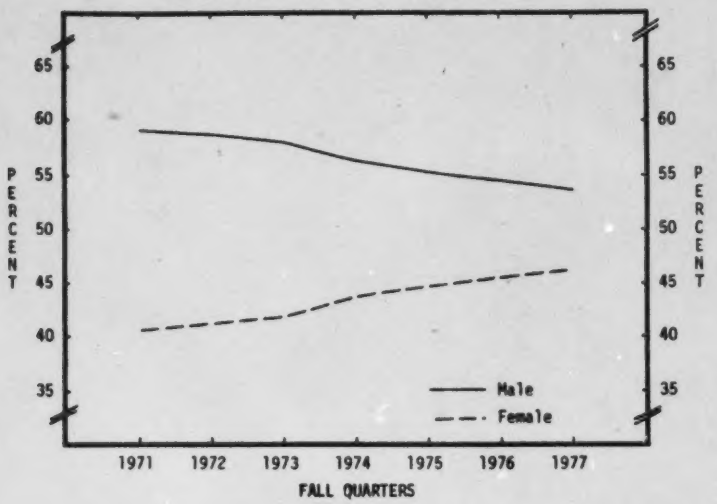
Like the rest of the U.S., the State of Washington has experienced this same trend toward statistical convergence of male/female enrollment (see figure 2.6). Table 2.5 shows that for all sectors of higher education the percent female is of total enrollment has continued to increase over time such that in 1976 there was very nearly a 50/50 male/female split in headcount enrollment. It is particularly interesting that in the community colleges, 1976 marked the first year in which there were more women than men attending, a difference of approximately 6,500 students. This shift was brought about by both a gain in female enrollment (up 4 percent or approximately 3,000 students over 1975) and a corresponding loss in male enrollment (down 7.5 percent or 5,600 students). Although it is impossible to unravel all of the causes related to this change it is highly probable that much of the loss in male enrollment is directly

FIGURE 2.6

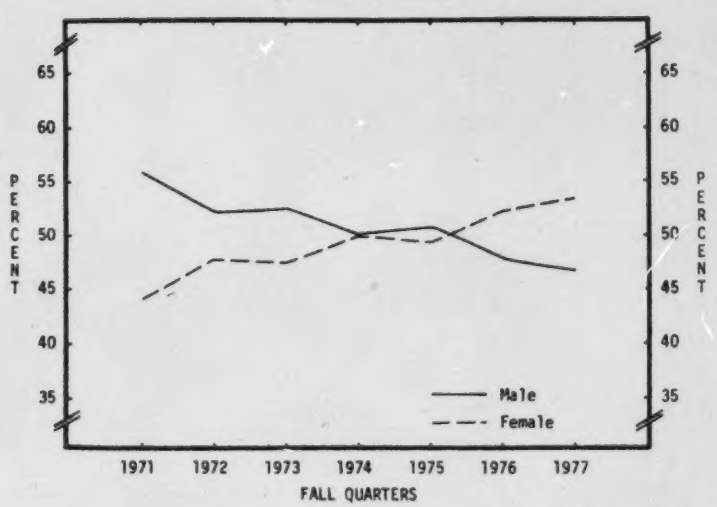
SEX AS A PERCENT OF TOTAL HEADCOUNT ENROLLMENT

	1971		1972		1973		1974		1975		1976		1977	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Four-Year Public:														
Male	43,284	59.25	42,809	58.65	42,154	58.09	41,912	56.24	43,250	55.32	42,755	54.53	43,188	53.70
Female	29,767	40.75	30,179	41.35	30,409	41.91	32,607	43.76	34,932	44.68	35,645	45.47	37,237	46.30
Community Colleges:														
Male	57,256	55.93	60,732	52.23	68,867	52.51	69,358	50.05	75,327	50.69	69,700	47.75	74,198	46.56
Female	45,108	44.07	55,544	47.77	62,292	47.49	69,225	49.95	73,284	49.31	76,262	52.25	85,149	53.44

FOUR-YEAR PUBLIC COLLEGE & UNIVERSITIES



COMMUNITY COLLEGES



OFM/PEES/P-426
2/78

TABLE 2.5

Change in Headcount Enrollment by Sex and Type of Institution:
Fall Quarters 1971-1977

Headcount Enrollment:	Community Colleges				Four-Year Public Colleges & Univ.				Four-Year Private Colleges & Univ.				State Total			
	Male	Percent	Female	Percent	Male	Percent	Female	Percent	Male	Percent	Female	Percent	Male	Percent	Female	Percent
1971	57,256	55.93	45,108	44.07	43,284	59.25	29,767	40.75	N/A		N/A		N/A		N/A	
1972	60,732	52.23	55,544	47.77	42,809	58.65	30,179	41.35	11,887	55.44	9,554	44.56	115,428	54.78	95,277	45.22
1973	68,867	52.51	62,292	47.49	42,154	58.09	30,409	41.91	12,305	55.08	10,035	44.92	123,326	54.55	102,736	45.45
1974	69,358	50.05	69,225	49.95	41,912	56.24	32,607	43.76	12,860	54.99	10,525	45.01	124,130	52.49	112,357	47.51
1975	75,327	50.69	73,284	49.31	43,250	55.32	34,932	44.68	13,122	54.48	10,964	45.52	131,699	52.50	119,180	47.50
1976	69,700	47.75	76,262	52.25	42,755	54.53	35,645	45.47	12,688	53.61	10,979	46.39	125,143	50.45	122,886	49.55
1977	74,199	46.56	85,149	53.44	43,188	53.70	37,237	46.30	N/A		N/A		N/A		N/A	
Percent Change Using 1971 as the Base Year:																
1972	6.07		23.14		(1.10)		1.38		N/A		N/A		N/A		N/A	
1973	20.28		38.10		(2.61)		2.16		3.52		5.03		6.84		7.83	
1974	21.14		53.47		(3.17)		9.54		8.19		10.16		7.54		17.93	
1975	31.56		62.46		(.08)		17.35		10.39		14.76		14.10		25.09	
1976	21.73		69.07		(1.22)		19.75		6.74		14.92		8.42		28.98	
1977	29.59		88.77		(.22)		25.09		N/A		N/A		N/A		N/A	

Note: N/A means not available

Source: Higher Education Enrollment Report, OFM;
MIS-1 Student Enrollment Report, SBCCE

attributable to the loss of eligibility for veteran benefits: total veterans enrolled in community colleges decreased from a high of 21,236 in Fall, 1975 to 13,483 in Fall, 1976, for a net loss of 7,753. On the other hand, the corresponding increase in female enrollment appears to be correlated with a number of social changes occurring in society; postponement of marriage and childbearing, higher incidence of separation and divorce, increasing emphasis on career and self-actualization, etc. Preliminary Fall, 1977 enrollment data indicate female enrollment is continuing to increase more rapidly than male enrollment.

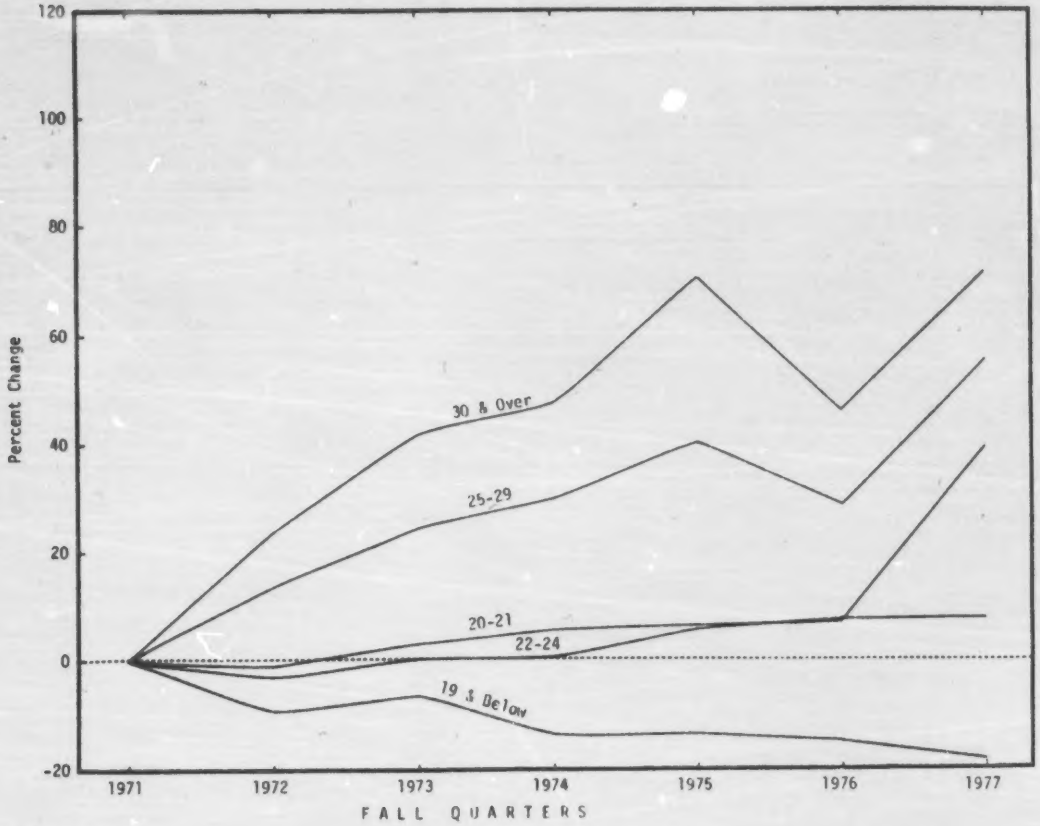
Age and Sex. Thus far, the analysis has intentionally focused on univariate descriptions of headcount enrollment in order to establish two trends that are occurring in higher education in Washington: (1) an increasing percentage of older students, and (2) a higher percentage of female students. These trends, however, have not occurred independent of one another and it is for that reason we briefly turn our attention to a crosstabulation of enrollment by age and sex. In so doing, enrollment growth is detailed more exactly.

Figures 2.7 and 2.8 illustrate that differential growth has occurred within the age/sex categories used in this crosstabulation. Although the largest percentage increase occurred among females 25 and over, disproportionate enrollment growth also occurred among males over 25 until 1976, at which time a significant decline was experienced. In the latter instance, the expiration of eligibility for veteran benefits is generally associated with the decline. For females between the ages of 20 and 24 there was moderate steady enrollment growth since 1971. This same age category for males, however, remained virtually unchanged since 1971. Enrollment declines were experienced for both males and females under the age of 20, although male enrollment declined substantially more than did female enrollment.

The result of differential growth rates by age and sex is a redistribution or change in the age/sex composition of enrollment. Table 2.6 illustrates this change by showing the percent each age/sex category is of total enrollment between 1971 and 1977. From this analysis it is observed

FIGURE 2.7
PERCENT CHANGE FROM 1971 IN FALL HEADCOUNT ENROLLMENT
IN COMMUNITY COLLEGES & FOUR-YEAR PUBLIC INSTITUTIONS

MALE

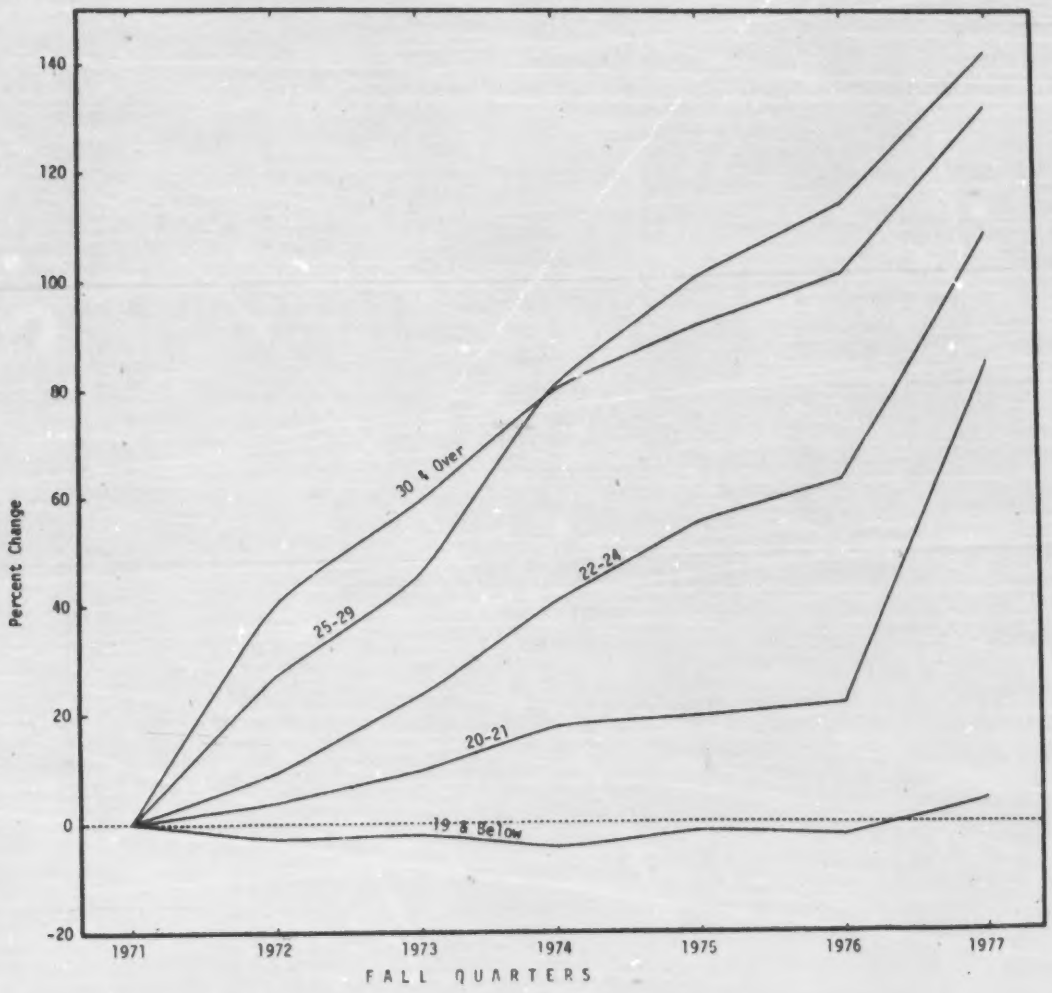


	1971	1972	1973	1974	1975	1976	1977
TOTAL MALE	0	3.22	10.67	10.92	18.20	12.10	27.00
19 & Below	0	(9.58)	(6.36)	(13.92)	(13.54)	(14.67)	(18.31)
20-21	0	(1.04)	2.90	5.43	6.25	6.93	39.46
22-24	0	(3.16)	0.23	0.32	5.74	7.35	7.56
25-29	0	13.69	24.45	29.71	40.37	28.66	55.61
30 & Over	0	23.79	42.35	47.24	70.66	46.33	71.72

OFM/PEES/P-426
4/78

FIGURE 2.8
PERCENT CHANGE FROM 1971 IN FALL HEADCOUNT ENROLLMENT
IN COMMUNITY COLLEGES & FOUR-YEAR PUBLIC INSTITUTIONS

FEMALE



	1971	1972	1973	1974	1975	1976	1977
TOTAL FEMALE	0	14.15	23.44	35.60	44.10	49.01	84.99
19 & Below	0	(2.90)	(2.05)	(4.55)	(1.18)	(2.14)	3.98
20-21	0	3.79	9.32	17.84	19.74	21.90	85.20
22-24	0	9.12	23.50	40.72	55.51	62.92	108.03
25-29	0	27.30	45.11	80.96	100.61	113.64	141.19
30 & Over	0	41.91	58.96	79.93	91.81	101.08	131.17

OFM/PEES/P-426
4/78

that since 1974 women have constituted a majority of the enrollment in the under age 20 category. In the 20-21, 22-24 and 25-29 categories, men still consitute a majority of the enrollment (27 percent compared to 23 percent) although the gap has been steadily narrowing. Females 30 and over have constituted a majority of enrollment since 1971 for this age category and the gap has steadily widened. Interestingly enough, the category with the largest percentage of total enrollment in 1971 was male 19 and below (15.18 percent) whereas the largest category in 1977 was female 30 and above (17.68). This latter observation, perhaps more than any other, best summarizes the shifting age/sex composition of headcount enrollment during the 70's.

Table 2.6

Percent Fall Headcount Enrollment by Age and Sex in Public Institutions of Higher Education, State of Washington, 1971-77.

	19 and Below		20-21		22-24		25-29		30 and Above	
Year	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1971	15.18	13.96	10.88	8.22	11.21	5.44	9.70	4.94	10.18	10.23
1972	12.72	12.56	9.98	7.91	10.06	5.50	10.22	5.83	11.68	13.45
1973	12.24	11.77	9.65	7.74	9.68	5.78	10.39	6.18	12.48	14.00
1974	10.76	10.97	9.44	7.97	9.26	6.30	10.35	7.36	12.34	15.15
1975	10.15	10.67	8.93	7.61	9.17	6.54	10.53	7.67	13.44	15.17
1976	10.13	10.68	9.10	7.84	9.41	6.93	9.75	8.26	11.65	16.08
1977	9.63	10.34	8.65	7.66	8.83	6.81	9.34	8.47	12.44	17.68

Note: Percent may not add to 100.0 because enrollments in the age not indicated category at public four-year institutions have been excluded. Includes community colleges and four-year public colleges and universities.

Source: Higher Education Enrollment Report, OFM; MIS-1 report, SBCCE.

Table 2.7

Percent of Students Taking Less than Ten Credit Hours, Fall Quarters 1971-1977.

Institution:	1971	1972	1973	1974	1975	1976	1977
University of Washington	N/A	N/A	16.5	18.3	19.8	20.9	20.9
Washington State University	N/A	N/A	6.8	6.9	6.7	6.9	7.2
Central Washington "	N/A	N/A	13.1	19.5	28.7	31.8	34.3
Eastern Washington "	N/A	N/A	12.1	14.1	15.2	17.2	17.0
The Evergreen State College	N/A	N/A	5.3	3.6	7.9	18.7	18.6
Western Wash. University	N/A	N/A	10.9	12.9	14.9	13.6	14.4
Community Colleges	50.3	56.4	57.3	58.6	56.0	57.9	61.6
State Total	N/A	N/A	41.7	43.4	42.6	43.9	47.1

Source: Higher Education Enrollment Reports, Office of Financial Management, Population, Enrollment and Economic Studies Division; Factbook, January 1977, State Board for Community College Education.

Attendance Status. *Since 1963, the national trend has been for increased numbers of part-time students of all ages,* particularly in the community colleges. The period of 1963-68 was characterized by a rapid increase in part-time study in the public two-year colleges and since 1968 the other sectors of higher education have experienced enrollment increases in part-time study (The Carnegie Foundation, 1975).

The State of Washington experienced this same pattern of part-time enrollment growth. In the community college sector, part-time enrollment increased rapidly and by 1970 more than half of the students enrolled in community colleges were taking fewer than ten credit hours. Since then, part-time enrollment has stablized in the community colleges at around 58 percent. The four-year public institutions have lagged behind the community colleges in part-time enrollment growth and there is considerable variation in the extent to which part-time enrollment charaterizes the separate institutions. For example, Table 2.7 illustrates that Washington State University has maintained part-time undergraduate enrollment at approximately 7 percent in

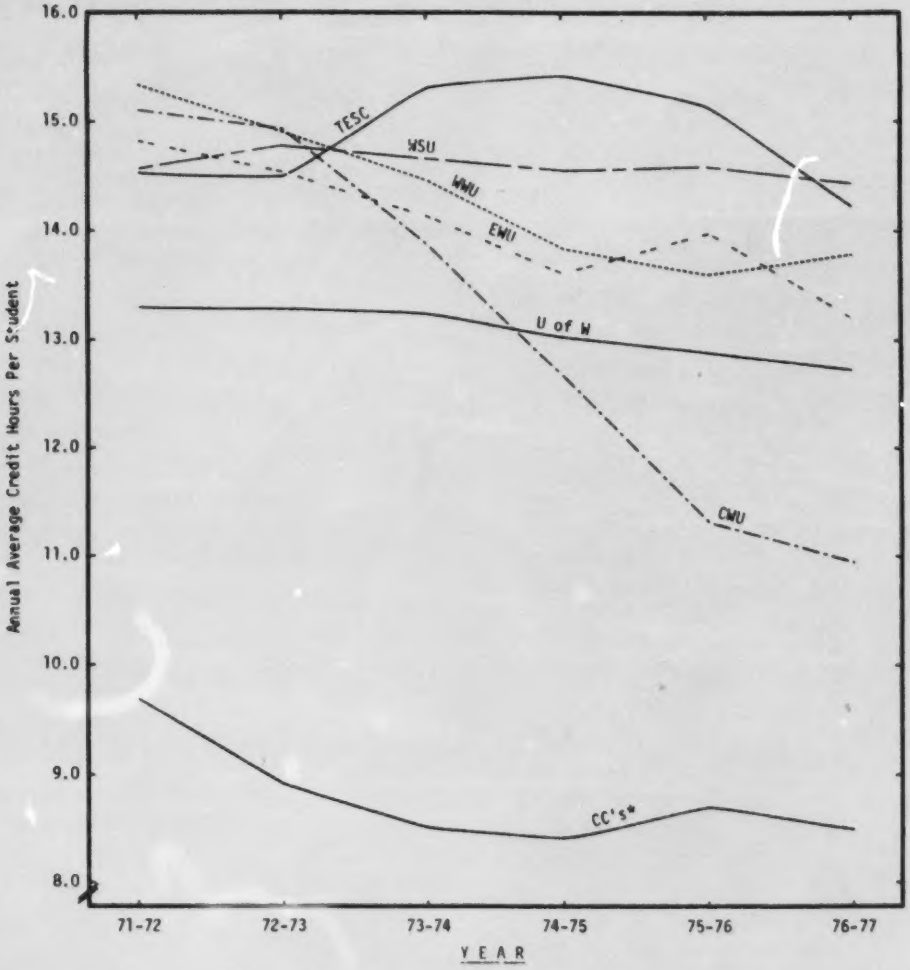
recent years while Central Washington University increased part-time undergraduate enrollment from 13.1 percent in 1973 to 34.3 percent in 1977. The remaining institutions have experienced a slow but steady increase in the percent of part-time enrollment.

As a result of the increase in part-time enrollment, the average number of credit hours per student has also declined in recent years. Figure 2.9 illustrates this decline for each school and the community college system. (As a summary measure, the average credit hour load per student is an index of the relationship between headcount enrollment and total student credit hours generated at a school.) As part-time enrollment increased at the four-year public institutions, it required a corresponding increase in total headcount enrollment to generate the same level of student credit hours. Figure 2.10 illustrates this relationship from enrollment data for the four-year public college and universities. As can be seen from the graph, the percent change in student credit hours between 1971-77 was only 2.3 percent. In order to generate this increase in the level of student credit hours, however, it required a 10 percent increase in headcount enrollment which resulted in a 7 percent decline in the average student credit hour load. Figure 2.11 shows this same relationship for the community college system: a 56 percent headcount enrollment growth between 1971-77 resulted in a 31 percent FTE growth and a 16 percent decline in the average student credit hour load.

Based on the preceding discussion of trends (i.e., age, sex, attendance status, and average student credit hours), *it is assumed that the growth in part-time enrollment came primarily from older students, the majority of whom are female.* Partial support for this assumption comes from age/sex student credit hour enrollment data which were collected by special request from the public institutions for 1976-77. A partial analysis of these data is presented in Table 2.8, which demonstrates a negative relationship between the age/sex categories and average student credit hour load: as age increases in both male and female categories, the average student credit hour load decreases. This observation holds for all institutions and for the community college system. Furthermore, a comparison between the male and female distributions by age reveals

FIGURE 2.9

ANNUAL AVERAGE CREDIT HOURS PER STUDENT
BY FOUR-YEAR PUBLIC INSTITUTIONS AND COMMUNITY COLLEGE SYSTEMS, 1971-72 TO 1976-77



	71-72	72-73	73-74	74-75	75-76	76-77
U of W	13.30	13.28	13.25	13.03	12.88	12.73
WSU	14.57	14.79	14.66	14.56	14.59	14.44
CWU	15.11	14.94	13.88	12.67	11.32	10.95
EWU	14.83	14.54	14.13	13.61	13.97	13.20
TESC	14.52	14.49	15.32	15.42	15.15	14.22
WWU	15.33	14.91	14.27	13.84	13.59	13.78
CC's *	9.7	8.9	8.5	8.4	8.7	8.5

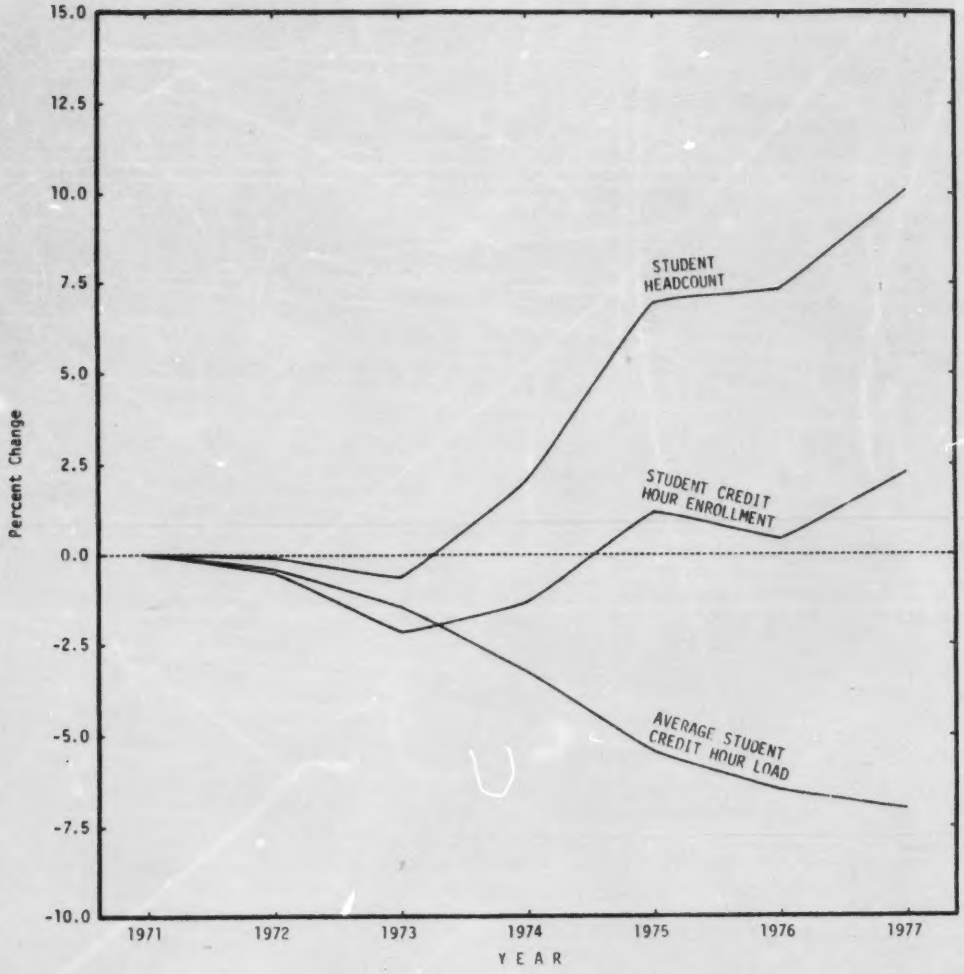
* Community College Credit Hours Per Student are for Fall Quarter and include just academic and occupational students (community service students are excluded).

SOURCE: Higher Education Enrollment Reports, OFM; MIS-1 Student Enrollment Report, SBCCE.

OFM/PEES/P-426
12/77

FIGURE 2.10

HEADCOUNT GROWTH COMPARED TO STUDENT CREDIT HOUR GROWTH
PUBLIC FOUR-YEAR COLLEGE AND UNIVERSITIES, FALL QUARTERS 1971-77
(PERCENT CHANGE USING 1971 AS BASE YEAR)

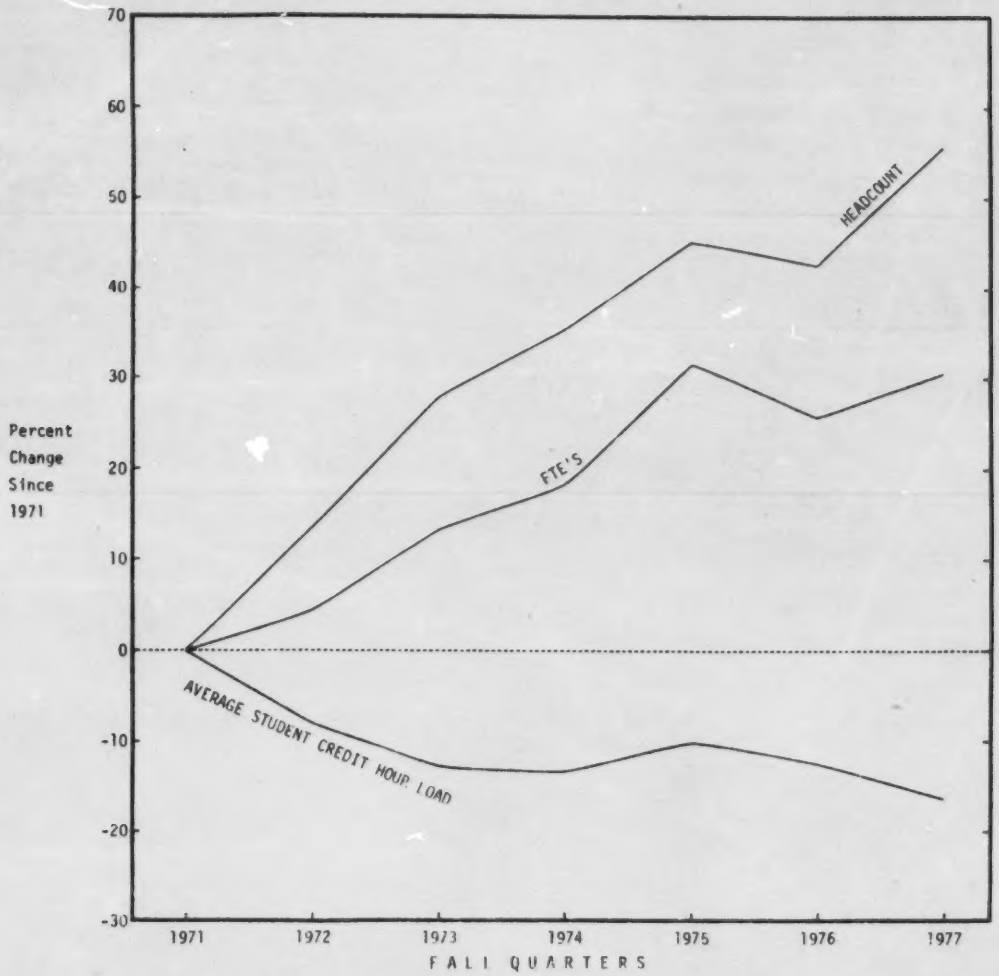


YEAR	HEADCOUNT ENROLLMENT	PERCENT CHANGE	STUDENT CREDIT HOUR ENROLLMENT	PERCENT CHANGE	AVERAGE STUDENT CREDIT HOUR LOAD	PERCENT CHANGE
1971	73,051		1,038,770		14.22	
1972	72,988	(0.1)	1,033,315	(0.5)	14.16	(0.4)
1973	72,563	(0.7)	1,015,556	(2.2)	14.00	(1.5)
1974	74,519	2.0	1,024,405	(1.4)	13.75	(3.3)
1975	78,162	7.0	1,051,206	1.2	13.44	(5.5)
1976	78,400	7.3	1,042,701	0.4	13.30	(6.5)
1977	80,425	10.1	1,063,095	2.3	13.22	(7.0)

OFM/PEES/P-426
12/77

FIGURE 2.11

HEADCOUNT GROWTH COMPARED TO FTE AND AVERAGE
CREDIT HOUR LOAD GROWTH; WASHINGTON COMMUNITY COLLEGES;
FALL QUARTERS 1971 - 1977
(PERCENT CHANGE SINCE 1971)



	10TH DAY FALL HEADCOUNT	PERCENT CHANGE	10TH DAY FALL FTE'S	PERCENT CHANGE	AVERAGE STUDENT CREDIT HOUR LOAD	PERCENT CHANGE
1971	102,364		65,970		9.7	
1972	116,276	13.59	68,870	4.40	8.9	- 8.25
1973	131,159	28.13	74,839	13.44	8.5	-12.37
1974	138,583	35.38	78,005	18.24	8.4	-13.40
1975	148,611	45.18	86,767	31.52	8.7	-10.31
1976	145,962	42.59	83,028	25.86	8.5	-12.37
1977	159,347	55.67	86,152	30.59	8.1	-16.49

that the average student credit hour load was higher for males than females in all age categories.

Table 2.8

Average Credit Hour Load by Age, Sex and Institutional Type, Fall 1976

	21 & Under	22-24	25-29	30 & Over	Total
Community Colleges					
Male	11.61	9.55	8.55	6.29	9.11
Female	11.36	7.55	6.04	5.00	7.41
Total	11.49	8.64	7.28	5.52	8.23
Public Four-Year Institutions					
Male	16.35	13.39	11.83	9.07	13.76
Female	15.73	12.36	10.07	8.21	13.06
Total	16.04	12.99	11.19	8.63	13.44

Source: HEEP, OFM; MIS-1, SBCCE.

This evidence, while not historical trend data, nevertheless supports the inference that part-time enrollment growth is largely due to the increases in the number of females and older students now attending college. The importance of this inference is that it suggests that citizen interest in a form of collegiate education other than the regular, day on-campus, residential degree program is rising considerably faster than the overall rate of enrollment increase. The consequences of such an enrollment shift for institutions is that they are faced with making adaptations to the way they do business--a shift away from the traditional day on-campus delivery to increasing flexibility of delivery that includes evenings, weekends, early mornings and off-campus delivery. Such changes pose new issues regarding curriculum, program completion requirements, stopping out, transferring credits, etc. Moreover, from the state's perspective a large number of policy issues emerge regarding the state's

interest and responsibility for expanding educational delivery to non-traditional students (e.g., are there limits to the accessibility and diversity for which the state should assume responsibility?). Since this represents a "new" era for higher education that is characteristically different from earlier experiences, it poses a series of such issues for which the past provides little guide to the future. Some of these issues are detailed and discussed in the last chapter of this report.

CHAPTER THREE

HIGHER EDUCATION ENROLLMENT GROWTH IN WASHINGTON: 1970-1990

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HIGHER EDUCATION ENROLLMENT GROWTH IN WASHINGTON: 1970-1990

For more than two decades, colleges and universities in the U.S. experienced unprecedented growth, particularly during the 1960's when the post war baby boom children completed high school and sought entrance into higher education. This increase in demand for higher education, created by larger 18-21 year-old population cohorts, was heightened by corresponding increases in the enrollment rate: for example, under conditions of social and technological change, citizens increased their participation in higher education in an effort to increase their marketability in the changing occupational structure of society. Similar to the rest of the country, the combined effect of larger college-age-cohorts and higher enrollment rates also produced phenomenal enrollment growth in Washington State. *In response to this growth, the state established eighteen additional community colleges and one four-year state college between 1955 and 1970.*

The future demand for postsecondary educational services and additional facilities in Washington, however, is less certain. Clearly the past two decades of enrollment growth and facility expansion are not satisfactory guides to the future. This is because anticipated demographic changes in the age structure indicate fewer "traditional-age" students. This will negatively impact entrances. At the same time, enrollment participation rates have been increasing for non-traditional categories of students (e.g., older, female, ethnic, etc.). Moreover, changes in the participation rates are the result of numerous social, economic, and political conditions (e.g., shifts in the economy, availability of financial aid, value of a liberal arts education versus occupational training and/or employment, more single adults, etc.) and it is difficult to evaluate the stability of these recent trends and the extent to which such trends will continue. Furthermore, balancing trends against one another to arrive at a reasonable long range enrollment outlook for the state is somewhat precarious, particularly when it is acknowledged that enrollment change in postsecondary education is heavily affected by subjective factors.

Enrollment analysts, however, generally recognize two interrelated components of enrollment change that, taken together, encompass these trends and subjective factors: (1) demographic changes, and (2) changes in the enrollment participation rate. In a study conducted by the Carnegie Commission (1971) the separate effects of changes in the 18-21 year-old population and changes in the enrollment rate on enrollment growth in the U.S. were analyzed. The following table summarizes their findings:

Table 3.1

UNDERGRADUATE DEGREE-CREDIT ENROLLMENT

Year	Number (in thousands)	Percentage Change	Percent of Increase Attributable to: Change in 18-to-21-Year-Old Population	Change in Enrollment Rate
1870	52	-	-	-
1880	116	122	30	70
1890	154	33	65	35
1900	232	50	29	71
1910	346	49	34	66
1920	582	68	10	90
1930	1,053	81	25	75
1940	1,388	32	26	74
1950	2,422	74	0	100
1960	3,227	33	19	81
1970	6,840	112	45	55

SOURCE: Carnegie Commission on Higher Education, New Students and New Places, McGraw-Hill, New York, 1971, p. 127.

This analysis shows that in every decade but one (1880-1890) more than half the enrollment increase over the previous decade was due, *not to population growth, but to increasing enrollment rates.* Even in the 1960-1970 decade, which witnessed the bulge in the 18-21 year-old population (i.e., baby boom children), population growth accounted for only 45 percent of the enrollment growth in the U.S.

This chapter, then, addresses the potential effects of these two interrelated conditions on future enrollment in higher education in this state: anticipated changes in the age structure of the population and changes in the age-sex specific enrollment participation rates. *The enrollment forecasts detailed below represent what would occur if our assumptions regarding (1) population growth, (2) enrollment participation rates, and (3) average student credit hour loads are correct.*

THE DEMOGRAPHIC FACTOR

Historical and forecast population data are presented in Tables 3.2 and 3.3. The historical data are of interest because they show the post-World War II "baby boom" and the "baby bust" of the 1960's and 1970's. These types of changes in the numbers of births significantly affect the age structure of a population as birth cohorts move through time. For example, the baby boom cohorts impacted elementary and secondary schools during the 1950's and 1960's, and the colleges and universities in the 1960's and early 1970's. The peak baby boom cohorts are now turning 18, the traditional age of college matriculation. The baby bust which followed, however, (nationally the bottom year was 1973) left some elementary and secondary educational facilities underutilized. Although the impact of the baby bust has not reached college enrollment yet, it will result in fewer 18 year-olds in each cohort between now and the early 1990's. This latter change in fertility is expected to negatively impact new college admissions from high school during the 1980's.

The historical data in Tables 3.1 and 3.2 also indicate that, except for the period 1970-1973, population in the State of Washington has increased as a result of net in-migration. In fact, since 1974 approximately 65 percent of the population growth in Washington has resulted from migration into the state. Since migration rates are normally greatest for persons in their late teens or twenties (age groups with the highest postsecondary education participation) the impact of the "baby bust" will be lessened.

The population forecast used in this study (Table 3.2) is the current OFM budget planning series. The series assumes an increase in birth rates to zero ultimate population growth levels by the early 1980's, an

TABLE 3.2

COMPONENTS OF POPULATION CHANGE
REVISED POPULATION SERIES DEVELOPED JULY 1977[1]
STATE OF WASHINGTON
1920-1978

(FIGURES IN THOUSANDS)

APRIL 1,	POPULATION	POPULATION CHANGE NUMBER	POPULATION CHANGE PERCENT	COMPONENTS OF CHANGE FROM PREVIOUS PERIOD: BIRTHS NUMBER[2]	BIRTHS RATE[3]	DEATHS NUMBER[2]	DEATHS RATE[3]	NATURAL INCREASE	NET MIGRATION NUMBER[2]	NET MIGRATION RATE[3]
Ten Year Intervals										
1920	1,356.6	214.6	18.8	227.7	167.8	122.4	90.2	105.2	109.4	80.6
1930	1,568.0	211.4	15.6	248.2	158.3	151.1	96.4	97.1	114.3	72.9
1940	1,736.2	168.2	10.7	233.6	134.5	176.9	101.9	56.7	111.5	64.2
1950	2,379.0	642.8	37.0	452.5	190.2	211.6	88.9	240.9	401.9	168.9
1960	2,853.2	474.3	19.9	625.9	219.4	241.9	84.8	384.1	90.2	31.6
1970	3,413.2	560.0	19.6	588.5	172.4	283.0	82.9	305.5	254.5	74.6
Single Years										
1965	3,065.0	57.0	1.9	55.9	18.2	27.3	8.9	28.6	28.4	9.3
1966	3,125.0	60.0	2.0	52.2	16.7	28.1	9.0	24.0	36.0	11.5
1967	3,229.0	104.0	3.3	52.9	16.4	28.8	8.9	24.1	79.9	24.7
1968	3,336.0	107.0	3.3	54.9	16.4	30.1	9.0	24.8	82.2	24.6
1969	3,397.0	61.0	1.8	58.0	17.1	30.6	9.0	27.4	33.6	9.9
1970	3,413.2	16.2	0.5	59.9	17.6	30.0	8.8	30.0	-13.7	-4.0
1971	3,433.0	19.7	0.6	60.0	17.5	29.8	8.7	30.3	-10.5	-3.1
1972	3,426.9	-6.1	-0.2	53.1	15.5	30.4	8.9	22.7	-28.8	-8.4
1973	3,436.8	9.9	0.3	47.7	13.9	30.4	8.8	17.3	-7.4	-2.2
1974	3,490.7	53.9	1.6	48.2	13.8	29.9	8.6	18.2	35.7	10.2
1975	3,536.8	46.2	1.3	50.1	14.2	30.3	8.6	19.8	26.4	7.5
1976	3,594.6	57.7	1.6	50.9[4]	14.2	29.9[4]	8.3	21.0	36.7	10.2
1977	3,662.0	67.4	1.9	54.1[4]	14.8	30.3[4]	8.3	23.8	43.6	11.9
1978	3,758.3	96.3	2.6	57.3	15.2	30.2	8.0	27.1	69.2	18.4

[1]Revised state population estimates for 1971-77 were developed on the basis of the most current data available as of July 1977. State estimates for 1971-76 in this revised series do not correspond to the official state April 1 estimates in Table 1 which are published annually and are not revised on the basis of special censuses or other information which becomes available after each estimate date.

[2]Calendar year figures for 1920 to 1940, April to April figures from 1950 to present.

[3]Rates per 1,000 population.

[4]Estimated.

[5]Preliminary.

OFM/PEES/P-251
1/78

TABLE 3.3

COMPONENTS OF CHANGE BY FIVE YEAR INTERVALS
STATE OF WASHINGTON

1950-2000

Year	Population	Total Change	Births	Deaths	Natural Increase	Net Migration
1950	2,378,963					
1955	2,604,000	225,037	300,655	115,353	185,302	39,735
1960	2,853,214	249,214	325,265	126,498	198,767	50,447
1960	3,065,000	211,786	310,581	135,425	175,156	36,630
1970	3,413,250	348,250	277,888	147,543	130,345	217,905
1975	3,536,890	123,640	259,110	150,827	108,283	15,357
1980	3,860,100	323,210	285,518	156,723	128,795	194,415
1985	4,253,900	393,800	364,418	171,589	192,829	200,971
1990	4,587,100	333,200	384,154	182,950	201,204	131,996
1995	4,849,100	262,000	380,085	192,680	187,405	74,595
2000	5,051,200	202,100	362,002	201,225	160,777	41,323

assumption some demographers think may be high. The forecast also assumes strong economic growth in the state through the early 1980's with a convergence to national growth rates for the balance of the century. The net migration values in Table 3.2 reflect this assumption.

Figure 3.1 disaggregates the population forecast by selected age cohorts and illustrates the aging of the population. Significant growth is anticipated in the 35 and over age groups throughout the forecast period, whereas the other age cohorts peak in the 1980's and then decline. These anticipated changes in the age structure of the population, particularly the 18-21 and 35-49 year old groups, illustrate the potentional demand for educational services delivered to "traditional age students," and "adult learners".

THE ENROLLMENT RATE FACTOR

Enrollment participation rates (i.e., the number enrolled divided by the population) are summary measures that indicate the percent of the population enrolled in higher education. As noted in Chapter One, the State of Washington has a higher participation rate than does most other states. In this section we present detailed historical participation rates (by institutional type, age and sex) and examine recent trend data that account for some of the observed changes in these rates. These changes, along with the demographic forecast, constitute the basis for the assumptions utilized in developing the enrollment forecasts.*

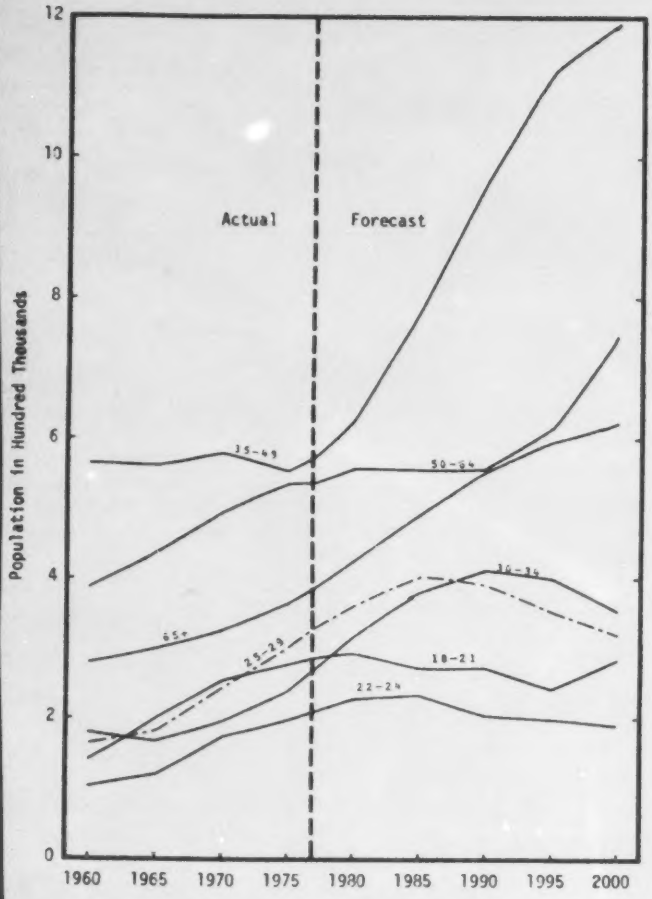
PUBLIC FOUR-YEAR INSTITUTIONS. Figure 3.2 presents the population, enrollment and participation rates by selected age categories for the

*Unlike most other states, the State of Washington has retrieved and maintained detailed enrollment age data historically. Because the state also develops detailed population estimates and projections by age it is possible to link the enrollment and popululation data together and utilize age specific participation rate analysis in developing enrollment forecasts.

Recently OFM has initiated the retrieval of age/sex student credit hour data from each institution and the community college system. This information will allow future enrollment forecasts to reflect differences in full-time/part-time and on-campus/off-campus delivery--differences which are increasingly characterizing higher education delivery.

FIGURE 3.1

POPULATION RANGE BY SELECTED AGE GROUPS
STATE OF WASHINGTON
1960 - 2000



POPULATION 18 YEARS & OVER

	18-21	22-24	25-29	30-34	35-49	50-64	65+
1960	143,222	104,044	166,376	179,899	563,757	389,564	279,045
1965	197,200	120,200	179,400	168,600	561,700	437,400	298,900
1970	252,767	171,809	239,138	193,731	578,690	494,482	320,712
1975	274,855	197,548	297,324	235,978	551,637	533,436	362,960
1977	285,671	211,568	327,427	266,512	569,120	545,264	386,717
1980	293,259	225,739	360,413	314,752	621,700	555,637	423,490
1985	269,570	231,987	402,239	378,225	777,591	554,607	489,330
1990	271,415	202,434	390,685	413,400	965,164	555,866	552,883
1995	240,411	196,060	350,282	396,088	1,123,700	614,141	595,055
2000	284,537	189,058	319,428	352,748	1,188,194	746,324	620,273

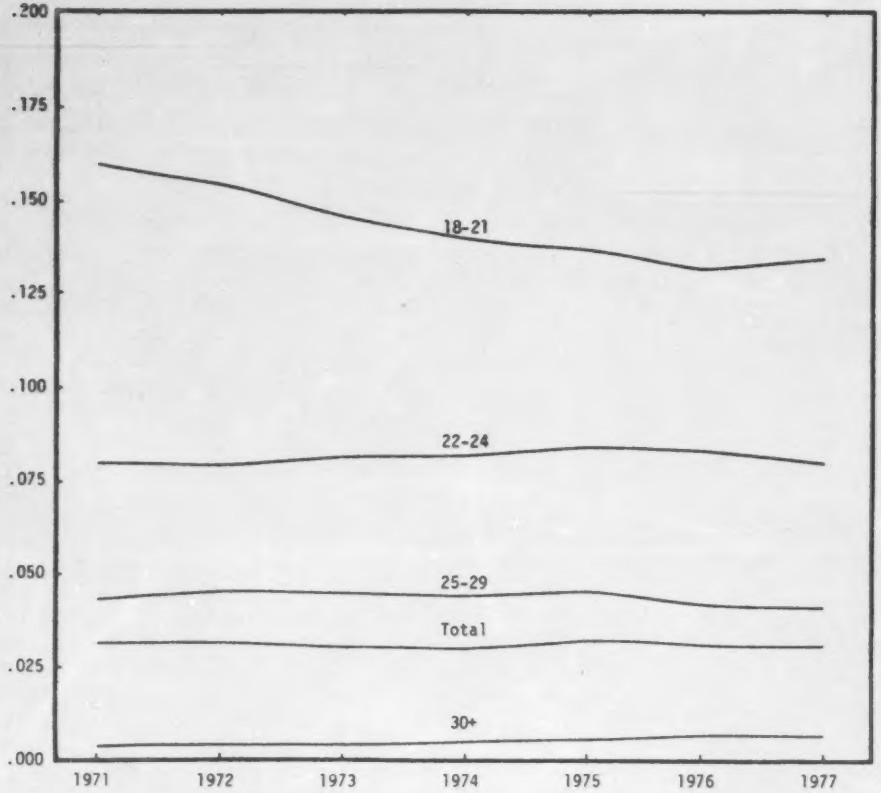
PERCENT DISTRIBUTION OF POPULATION 18 YEARS & OVER

	18-21	22-24	25-29	30-34	35-49	50-64	65+
1960	7.84	5.70	9.11	9.85	30.88	21.34	15.28
1965	10.04	6.12	9.14	8.59	28.61	22.28	15.22
1970	11.23	7.63	10.62	8.61	25.70	21.96	14.25
1975	11.20	8.05	12.12	9.62	22.48	21.74	14.79
1977	11.02	8.16	12.63	10.28	21.95	21.03	14.92
1980	10.49	8.08	12.89	11.26	22.24	19.88	15.15
1985	8.69	7.47	12.96	12.19	25.05	17.87	15.77
1990	8.10	6.04	11.66	12.33	28.79	16.58	16.49
1995	6.84	5.58	9.96	11.27	31.96	17.47	16.93
2000	7.69	5.11	8.63	9.53	32.11	20.17	16.76

OFM/PEES/P-251
1/78

FIGURE 3.2

ENROLLMENT PARTICIPATION RATES BY AGE: 1971-1977
PUBLIC FOUR-YEAR COLLEGE & UNIVERSITIES



Population in Thousands

	18-21	22-24	25-29	30+	Total
1971	258.0	183.7	243.4	1,598.3	2,283.4
1972	258.2	183.7	256.0	1,600.2	2,298.0
1973	262.1	184.5	266.0	1,618.1	2,330.7
1974	270.4	191.7	279.8	1,653.2	2,395.1
1975	274.9	197.5	297.3	1,684.0	2,453.7
1976	281.6	204.0	318.3	1,717.4	2,521.2
1977	285.7	211.6	327.4	1,767.6	2,592.3

Enrollment

	21 & Under	22-24	25-29	30+	Total
1971	41,207	14,691	10,569	6,584	73,051
1972	39,782	14,584	11,598	7,024	72,988
1973	38,080	15,006	11,967	7,510	72,563
1974	37,579	15,712	12,511	8,717	74,519
1975	37,701	16,555	13,538	10,388	78,182
1976	37,085	16,905	13,372	11,038	78,400
1977	38,410	16,880	13,385	11,750	80,425

Participation Rates

	18-21	22-24	25-29	30+	Total
1971	.15971	.07997	.04342	.00412	.03199
1972	.15407	.07941	.04531	.00439	.03176
1973	.14528	.08134	.04499	.00464	.03113
1974	.13896	.08196	.04472	.00527	.03111
1975	.13717	.08380	.04553	.00617	.03186
1976	.13172	.08289	.04201	.00643	.03110
1977	.13446	.07979	.04088	.00665	.03102

OFM/PEES/P-426
4/78

public four-year institutions, 1971-77. *The most significant change in participation rates by age is the decline in the percent of the population 18-21 enrolled in higher education.* This decline corresponds to the decline in new entrances to college from Washington high schools (viz. 19.71 pecent in 1971 to 16.54 percent in 1977). Both declines are the result of numerous social changes occurring in society such as elimination of the draft, declining value of a liberal arts education in the market place, increasing costs of education to the individual, tendency to delay entrance to college, etc. These trends, in conjunction with the projected decline in the number of 18-21 year-olds during the 1980's (see Figure 3.1), represent a "double whammy" for the enrollment of "traditional age" students in the future, especially when it is realized that approximately 50 percent of the students enrolled in public four-year schools come from this cohort.

The participation rates for the 22-24 and 25-29 age groups, on the other hand, remained fairly stable throughout the 1970's (viz., 8 percent and 4 percent respectively). The only exception was in the 25-29 age group in 1976 where the participation rate declined as a result of the loss of veteran educational benefits and the subsequent exit of a large number of veterans. The population outlook for these age cohorts (Figure 3.1), however, shows an increase to the mid 1980's followed by decline. Based on these trends, we expect enrollment change in these age cohorts to reflect the demographic forecast (i.e., growth to the mid 1980's followed by enrollment decline.)

Participation in higher education for those 30 and over has increased slightly in recent years signifying the increase in mid-life career changes and the tendency toward "life long learning". This trend, coupled with the population increases forecast for these age cohorts, is expected to impact rather significantly the demand for educational services for those 30 and over in the future.

COMMUNITY COLLEGE SYSTEM. As noted in Chapter Two, substantial enrollment changes by age and sex occurred within the community college system during the 1970's. These changes were sufficiently different from the four-year institutions to merit separate analysis and discussion.

Figures 3.3 and 3.4 present the detailed age/sex participation rates between 1971 and 1977. Like the four-year schools, participation rates in the community college system vary inversely with age: the younger the age cohort the higher the participation rate. Unlike the four-year schools, however, where 50 percent of the enrollments are in the 18-21 age cohort, only 30 percent of the community college enrollments are in this age category--signifying the older age of students in the community college system.

An analysis of these participation rates by sex indicates that male age cohorts are similar to the four-year schools (e.g., slight overall decline in the 18-21 age groups; stability in the 22-24 age groups; an aberration in the 25-29 age groups in 1976 because of veteran benefits; and an increase in the 30 and over cohorts). Female participation rates, on the other hand, have increased substantially in each age cohort. Furthermore, in all age cohorts but one (i.e., 22-24 age group), female participation rates exceeded male participation rates during the 1970's. Alternative role expectations, increased participation and opportunities in the labor force, and a backlog of unmet needs have all contributed to the rapid increase in female enrollment in the community colleges.

THE ENROLLMENT FORECAST

PUBLIC FOUR-YEAR INSTITUTIONS. Fall enrollment participation rates by age cohorts were trended and applied to corresponding population age cohorts for each year between 1978 and 1990 to project fall headcount enrollment in the public four-year institutions in the state.* The forecast of fall headcount enrollment was then converted to annual average headcount to correspond with state budget requirements. The results of this analysis, along with the percent of growth on an annual basis, are presented in Table 3.4.

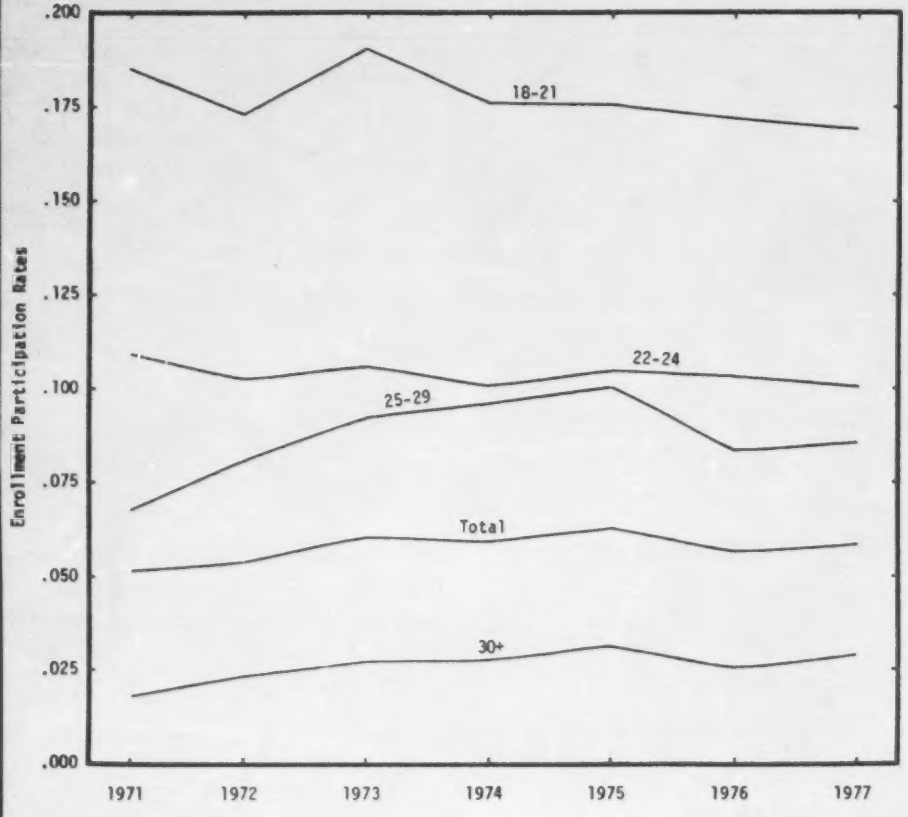
From a long range enrollment outlook the most important observations

*The participation rates assumed in the forecast have not been presented in tabular form. The interested reader can easily reconstruct the assumed rates, however, by combining the information in Figure 3.1 with Figures 3.5 and 3.6. More detailed information on participation rates can also be obtained from OFM.

FIGURE 3.3

ENROLLMENT PARTICIPATION RATES BY AGE AND SEX
WASHINGTON COMMUNITY COLLEGES
FALL, 1971 - FALL, 1977

M A L E



Population in Thousands

	18-21	22-24	25-29	30+	Total
1971	132.2	91.8	122.7	770.4	1,117.1
1972	132.1	92.4	128.3	769.6	1,122.3
1973	133.5	94.1	132.6	777.1	1,137.3
1974	138.0	97.9	139.5	793.7	1,169.2
1975	139.9	101.2	149.0	807.9	1,198.0
1976	143.7	103.9	160.9	823.5	1,231.9
1977	146.0	108.0	165.9	847.7	1,267.6

Enrollment

	21 & Under	22-24	25-29	30+	Total
1971	24,488	9,915	8,958	13,895	57,256
1972	22,834	9,421	10,431	18,046	60,732
1973	25,445	10,003	12,277	21,142	68,867
1974	24,301	9,869	13,420	21,768	69,358
1975	24,614	10,599	14,931	25,183	75,327
1976	24,720	10,759	13,430	20,791	69,700
1977	24,744	10,882	14,224	24,348	74,198

Participation Rates

	18-21	22-24	25-29	30+	Total
1971	.18516	.10796	.07304	.01804	.05125
1972	.17283	.10201	.08131	.02345	.05411
1973	.19064	.10633	.09255	.02721	.06056
1974	.17608	.10079	.09618	.02742	.05932
1975	.17589	.10476	.10021	.03117	.06287
1976	.17202	.10358	.08349	.02525	.05658
1977	.16953	.10073	.08575	.02872	.05854

NOTE: Population rounded to nearest thousand. Participation rates calculated using detailed population data.
Enrollments are adjusted to include age and sex not indicated and to reflect 10th day counting methodology.

OFM/PEES/P-273
2/78

FIGURE 3.4

ENROLLMENT PARTICIPATION RATES BY AGE AND SEX
WASHINGTON COMMUNITY COLLEGES
FALL, 1971 - FALL, 1977

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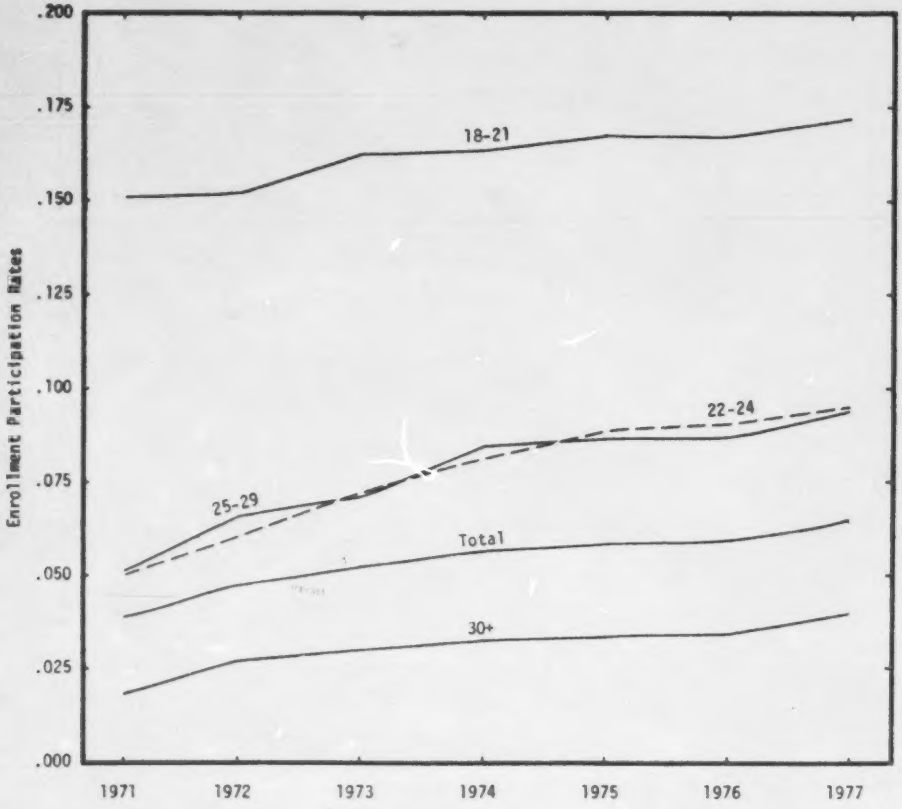


Population in Thousands					
	18-21	22-24	25-29	30+	Total
1971	125.8	91.9	120.8	827.9	1,166.3
1972	126.1	91.3	127.7	830.6	1,175.7
1973	128.6	90.4	133.4	841.0	1,193.5
1974	132.4	93.8	140.2	859.5	1,226.0
1975	134.9	96.4	148.3	876.1	1,255.7
1976	137.8	100.1	157.5	893.9	1,289.3
1977	139.7	103.5	161.5	919.9	1,324.7

Enrollment					
	21 & Under	22-24	25-29	30+	Total
1971	18,991	4,624	6,165	15,328	45,108
1972	19,183	5,483	8,368	22,510	55,544
1973	20,921	6,529	9,536	25,306	62,292
1974	21,642	7,620	11,853	28,110	69,225
1975	22,572	8,530	12,835	29,347	73,284
1976	23,072	9,083	13,672	30,435	76,262
1977	24,004	9,815	15,173	36,157	85,149

Participation Rates					
	18-21	22-24	25-29	30+	Total
1971	.15101	.05033	.05105	.01851	.03868
1972	.15213	.06005	.06553	.02710	.04724
1973	.16263	.07221	.07150	.03009	.05219
1974	.16342	.08125	.08452	.03271	.05647
1975	.16731	.08851	.08653	.03350	.05836
1976	.16738	.09075	.08682	.03405	.05915
1977	.17181	.09480	.09392	.03931	.06428

NOTE: Population rounded to nearest thousand. Participation rates calculated using detailed population data. Enrollments are adjusted to include age and sex not indicated and to reflect 10th day counting methodology.

OFM/PEES/P-273
2/78

from this analysis are (1) the slow down in the projected annual growth rate between 1978 and 1981, and (2) the projected period of relative enrollment stability between 1982 and 1990.

This future, when examined by age cohort enrollment (Figure 3.5), indicates losses in both the 18-21 age cohort (i.e., from a high of 38,708 in 1978 to a low of 33,781 in 1987) and the 22-24 age cohort (i.e., from a high of 17,395 in 1984 to a low of 15,027 in 1990). The remaining age cohorts, 25-29 and 30 and over, are projected to increase in enrollment throughout the forecast period (from 13,813 to 15,706 and from 12,571 to 19,545 respectively). The impact of demographic dynamics and changing enrollment participation rates, then, is realized in terms of a larger number of older students and fewer traditional age students in the four-year system.

Because the annual average credit hour load has been declining at all institutions (Figure 2.9) and because the older student generates fewer credit hours (Table 2.8), the anticipated changes in the age structure are expected to reduce the growth rate in student credit hours more than in headcount enrollment. (This assumes a continuation of the historical relationships graphed in Figures 2.10 and 2.11.) The projected annual average student credit growth for the public four-year schools is presented in Table 3.5. An examination of the growth pattern indicates a small amount of growth (less than 1 percent per annum) to 1980-81 followed by relative stability.

COMMUNITY COLLEGE SYSTEM. The analysis used to forecast community college enrollment follows the same procedures used for the four-year institutions: age-specific participation rates were trended and applied to the projected age-specific population cohorts. The results of this analysis are presented in Figure 3.6 and Table 3.6.

Like the four-year schools, the forecast shows a slow down in the enrollment growth rate between 1977-78 and 1982-83 followed by a period of relative enrollment stability. Because of the diffuse age structure of students enrolled in community colleges and the fact that older students take fewer credit hours, the forecast of annual average FTE enrollment growth is appreciably smaller than the forecast of headcount enrollment growth.

TABLE 3.4

FALL AND ANNUAL AVERAGE HEADCOUNT ENROLLMENT
PUBLIC FOUR-YEAR COLLEGE AND UNIVERSITIES
1971 - 1990

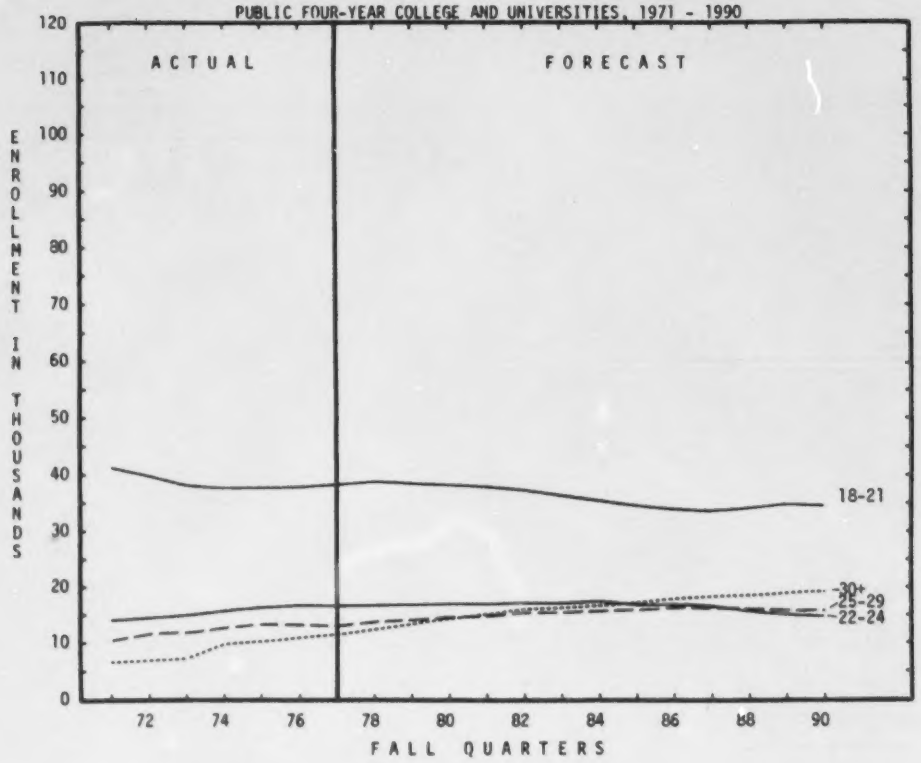
	FALL ENROLLMENT			ANNUAL AVERAGE ENROLLMENT		
	Headcount	Annual Growth		Headcount	Annual Growth	
		Number	Percent		Number	Percent
ACTUAL						
1971-72	73,051			69,813		
1972-73	72,988	-63	-.09	70,421	608	.87
1973-74	72,563	-425	-.58	70,470	49	.07
1974-75	74,519	1,956	2.70	73,128	2,658	3.77
1975-76	78,182	3,663	4.92	75,897	2,769	3.79
1976-77	78,400	218	.28	76,653	756	1.00
1977-78	80,425	2,025	2.58	76,978	325	.42
ESTIMATE						
1978-79	81,942	1,517	1.89	79,889	2,911	3.78
1979-80	83,381	1,439	1.76	81,292	1,403	1.76
1980-81	84,515	1,134	1.36	82,391	1,099	1.35
1981-82	85,342	827	.98	83,213	822	1.00
1982-83	85,721	379	.44	83,586	373	.45
1983-84	85,830	109	.13	83,686	100	.12
1984-85	85,723	-107	-.12	83,579	-107	-.13
1985-86	85,241	-482	-.56	83,095	-484	-.58
1986-87	84,805	-436	-.51	82,658	-437	-.53
1987-88	84,846	41	.05	82,699	41	.05
1988-89	85,090	244	.29	82,944	245	.30
1989-90	85,528	438	.51	83,383	439	.53
199C-91	85,075	-453	-.53	82,928	-455	-.55

80

OFM/PEES/P-273
1/78

FIGURE 3.5

FALL HEADCOUNT ENROLLMENT DISTRIBUTIONS BY AGE,
PUBLIC FOUR-YEAR COLLEGE AND UNIVERSITIES, 1971 - 1990



	ENROLLMENT					PERCENT DISTRIBUTION OF ENROLLMENT				
	18-21	22-24	25-29	30+	TOTAL	18-21	22-24	25-29	30+	TOTAL
	ACTUAL									
1971	41,207	14,691	10,569	6,584	73,051	56.41	20.11	14.47	9.01	100.00
1972	39,782	14,584	11,598	7,024	72,988	54.50	19.98	15.89	9.62	100.00
1973	38,080	15,006	11,967	7,510	72,563	52.48	20.68	16.49	10.35	100.00
1974	37,579	15,712	12,511	8,717	74,519	50.43	21.08	16.79	11.70	100.00
1975	37,701	16,555	13,538	10,388	78,182	48.22	21.17	17.32	13.29	100.00
1976	37,085	16,905	13,372	11,038	78,400	47.30	21.56	17.06	14.08	100.00
1977	38,410	16,880	13,385	11,750	80,425	47.76	20.99	16.64	14.61	100.00
	ESTIMATE									
1978	38,708	16,850	13,813	12,571	81,942	47.24	20.56	16.86	15.34	100.00
1979	38,672	17,027	14,232	13,450	83,381	46.38	20.42	17.07	16.13	100.00
1980	38,324	17,160	14,587	14,444	84,515	45.35	20.30	17.26	17.09	100.00
1981	38,094	17,110	14,977	15,161	85,342	44.64	20.05	17.55	17.76	100.00
1982	37,238	17,216	15,344	15,923	85,721	43.44	20.08	17.90	18.58	100.00
1983	36,467	17,328	15,654	16,381	85,830	42.49	20.19	18.24	19.09	100.00
1984	35,584	17,395	15,909	16,835	85,723	41.51	20.29	18.56	19.64	100.00
1985	34,564	17,211	16,168	17,298	85,241	40.55	20.19	18.97	20.29	100.00
1986	33,785	16,945	16,311	17,764	84,805	39.84	19.98	19.23	20.95	100.00
1987	33,781	16,515	16,329	18,221	84,846	39.81	19.46	19.25	21.48	100.00
1988	34,253	15,908	16,255	18,674	85,090	40.26	18.70	19.10	21.95	100.00
1989	34,954	15,359	16,110	19,105	85,528	40.87	17.96	18.84	22.34	100.00
1990	34,797	15,027	15,706	19,545	85,075	40.90	17.66	18.46	22.97	100.00

OFM/PEES/P-426
4/78

TABLE 3.5

ANNUAL AVERAGE STUDENT CREDIT HOURS AND CREDIT HOUR LOAD
PUBLIC FOUR-YEAR COLLEGE AND UNIVERSITIES
1971 - 1990

	ANNUAL AVERAGE CREDIT HOUR LOAD	ANNUAL AVERAGE STUDENT CREDIT HOURS		
		Credit Hours	Annual Growth	
			Number	Percent
ACTUAL				
1971-72	14.17	988,951		
1972-73	14.08	991,343	2,392	.24
1973-74	13.85	976,196	-15,147	-1.53
1974-75	13.54	990,033	13,837	1.42
1975-76	13.32	1,011,215	21,182	2.14
1976-77	13.12	1,006,015	-5,200	-.51
1977-78	13.15	1,011,904	5,889	.59
ESTIMATE				
1978-79	12.73	1,016,605	4,701	.46
1979-80	12.64	1,027,860	11,255	1.11
1980-81	12.57	1,035,363	7,503	.73
1981-82	12.48	1,038,313	2,950	.28
1982-83	12.47	1,042,649	4,336	.42
1983-84	12.47	1,043,950	1,301	.12
1984-85	12.48	1,042,697	-1,253	-.12
1985-86	12.48	1,037,025	-5,672	-.54
1986-87	12.48	1,031,910	-5,115	-.49
1987-88	12.48	1,032,387	477	.05
1988-89	12.48	1,035,258	2,871	.28
1989-90	12.48	1,040,401	5,143	.50
1990-91	12.48	1,035,073	-5,328	-.51

OFM/PEES/P-273
1/78

An analysis of this future by age cohort enrollment (Figure 3.6) further signals the impact of an aging population: by 1990, 50 percent of the fall headcount enrollment in the community college system is projected to be in the 30 and over category. This represents an enrollment growth of 42,434 (i.e., 68.4 percent increase) older students by 1990. This is expected to have an appreciable affect on FTE enrollment and the delivery of services since most older students are part-time enrollees taking non-degree credit programs (e.g., ABE, occupational supplemental, and occupational non-gainful) in off-campus locations and during the evening.

At the same time, the number of students 18-24 is expected to decrease between 1982 and 1990. These students frequently enroll full-time in degree-credit programs (e.g., academic transfer and occupational preparatory) that are taught on-campus during the day. The combined effect of fewer younger students and more older students poses a number of long range policy issues and planning decisions which must be resolved by state leadership.

CONCLUSION AND SUMMARY

The data indicate annual enrollment growth to the early 1980's followed by a period of enrollment stability. Important changes in the age distribution of students, however, are anticipated as a result of shifts in the age structure of the population and changes in age-specific participation rates. As the age distribution of higher education enrollment changes, institutions will be forced into adapting programs and delivery for a characteristically different type of client.

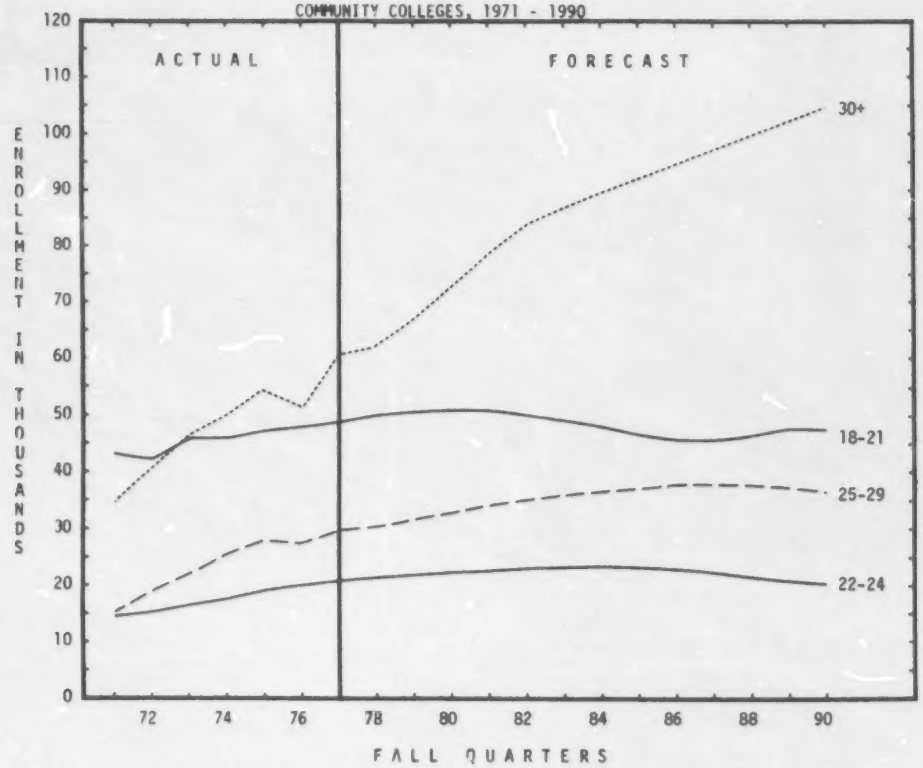
The negative impact of demographic dynamics and participation rate trends is greatest for the four-year system and the day on-campus community college enrollment because of their more concentrated age structure. Off-campus and evening enrollment, on the other hand, is expected to expand in response to an aging population and the increased popularity of adult learning.

This enrollment outlook is based on a moderately optimistic view of state population growth caused by migration. Should state growth be less than projected, enrollment declines rather than stability will occur during the 1980's. The magnitude of this difference could be

considerable were the 1970-1973 "Boeing Bust" to repeat itself. This outlook also poses a number of long range enrollment policy issues that require state level attention. These policy issues and alternative considerations are discussed in the next chapter.

FIGURE 3.6

FALL HEADCOUNT ENROLLMENT DISTRIBUTIONS BY AGE,
COMMUNITY COLLEGES, 1971 - 1990



	ENROLLMENT					PERCENT DISTRIBUTION OF ENROLLMENT				
	18-21	22-24	25-29	30+	TOTAL	18-21	22-24	25-29	30+	TOTAL
	ACTUAL									
1971	43,479	14,539	15,123	29,223	102,364	42.47	14.20	14.77	28.55	100.00
1972	42,017	14,904	18,799	40,556	116,276	36.14	12.82	16.17	34.88	100.00
1973	46,366	16,532	21,813	46,448	131,159	35.35	12.60	16.63	35.41	100.00
1974	45,943	17,489	25,273	49,878	138,583	33.15	12.62	18.24	35.99	100.00
1975	47,186	19,129	27,766	54,530	148,611	31.75	12.87	18.68	36.69	100.00
1976	47,792	19,842	27,102	51,226	145,962	32.74	13.59	18.57	35.10	100.00
1977	48,748	20,697	29,397	60,505	159,347	30.59	12.99	18.45	37.97	100.00
	ESTIMATE									
1978	49,994	21,214	30,132	62,066	163,406	30.59	12.98	18.44	37.98	100.00
1979	50,566	21,808	31,506	67,357	171,237	29.53	12.74	18.40	39.34	100.00
1980	50,736	22,354	32,785	73,014	178,889	28.36	12.50	18.33	40.82	100.00
1981	50,952	22,628	34,111	78,753	186,444	27.33	12.14	18.30	42.24	100.00
1982	50,024	22,977	35,154	84,270	192,425	26.00	11.94	18.27	43.79	100.00
1983	49,187	23,226	36,012	87,049	195,474	25.16	11.88	18.42	44.53	100.00
1984	47,996	23,318	36,593	89,468	197,375	24.32	11.81	18.54	45.33	100.00
1985	46,712	23,117	37,256	92,110	199,195	23.45	11.61	18.70	46.24	100.00
1986	45,753	22,792	37,653	94,787	200,985	22.76	11.34	18.73	47.16	100.00
1987	45,836	22,252	37,769	97,420	203,277	22.55	10.95	18.58	47.92	100.00
1988	46,478	21,435	37,604	99,843	205,360	22.63	10.44	18.31	48.62	100.00
1989	47,426	20,701	37,259	102,147	207,533	22.85	9.97	17.95	49.22	100.00
1990	47,213	20,253	36,324	104,500	208,290	22.67	9.72	17.44	50.17	100.00

NOTE: Rolling 10th Day counting methodology; academic and occupational students only; all funding sources included.

OFM/PEES/P-426
4/78

TABLE 3.6

FALL HEADCOUNT, FALL FTE'S, AND ANNUAL AVERAGE
FTE ENROLLMENT ESTIMATES, WASHINGTON
COMMUNITY COLLEGES
1971-1990

	FALL 10TH DAY HEADCOUNT			FALL 10TH DAY ENROLLMENT			ANNUAL AVERAGE FTE ENROLLMENT		
	Enrollment	Annual Growth Number	Percent	FTE'S	Annual Growth Number	Percent	FTE'S*	Annual Growth Number	Percent
					ACTUAL				
1971-72	102,364			65,970			67,463		
1972-73	116,276	13,912	13.59	68,870	2,900	4.40	71,570	4,107	6.09
1973-74	131,159	14,883	12.80	74,839	5,969	8.67	75,665	4,095	5.72
1974-75	138,583	7,424	5.66	78,005	3,166	4.23	82,949	7,284	9.63
1975-76	148,611	10,028	7.24	86,767	8,762	11.23	88,140	5,191	6.26
1976-77	145,962	-2,649	-1.78	83,028	-3,739	-4.31	86,746	-1,394	-1.58
					ESTIMATE				
1977-78	159,347	13,385	9.17	86,152	3,124	3.76	89,072	2,326	2.68
1978-79	163,406	4,175	2.62	88,076	1,923	2.23	91,243	2,171	2.44
1979-80	171,237	7,831	4.79	91,169	3,093	3.51	93,904	2,661	2.92
1980-81	178,889	7,652	4.47	94,269	3,100	3.40	96,861	2,957	3.15
1981-82	186,444	7,555	4.22	97,290	3,021	3.20	99,243	2,382	2.46
1982-83	192,425	5,981	3.21	99,272	1,982	2.04	101,264	2,021	2.04
1983-84	195,474	3,049	1.58	100,208	936	.94	102,219	955	.94
1984-85	197,375	1,901	.97	100,525	317	.32	102,543	324	.32
1985-86	199,195	1,820	.92	100,723	198	.20	102,745	202	.20
1986-87	200,985	1,790	.90	100,987	264	.26	103,014	269	.26
1987-88	203,277	2,292	1.14	101,772	785	.78	103,815	801	.78
1988-89	205,360	2,083	1.02	102,612	840	.83	104,671	856	.82
1989-90	207,533	2,173	1.06	103,605	993	.97	105,684	1,013	.97
1990-91	208,290	757	.36	103,605	--	--	105,684	--	--

NOTE: Fall, 1977 headcount and FTE data are actual. Academic and vocational only (community service excluded); all funding sources. 8th day headcount and FTE enrollments from 1971-72 through 1975-76 have been adjusted to reflect 10th day counting methodology.

*Includes contract funds which account for approximately 3,000 annual average FTE's per year.

OFM/PEES/P-273
2/78

CHAPTER FOUR

ENROLLMENT CHANGE AND POLICY CONSIDERATIONS IN POSTSECONDARY EDUCATION

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ENROLLMENT CHANGE AND POLICY CONSIDERATIONS IN POSTSECONDARY EDUCATION

Chapter Three details the long range enrollment forecasts for the four-year public college and universities and the community college system to 1990. The projected enrollment indicates a slow down in the growth rate between now and 1981 (approximately 2 percent per annum) followed by a period of relative enrollment stability in higher education. This growth pattern is similar to that projected for the U.S. as a whole (NCES, 1977). Because these forecasts are based on the "age/sex ratio methodology"* it holds that any deviations from the projected growth result from variations in (1) the projected migration component of the population in Washington, and/or (2) the age/sex specific enrollment participation rates utilized in the forecast. In the latter case, there exists a number of factors, policy included, which could significantly influence the enrollment participation rates by age and sex and subsequently alter the forecast.

Because of the current fluctuations in the educational environment, it has become increasingly important to develop and maintain enrollment tracking and forecasts. To capture these changing conditions, enrollment studies must be repeated frequently and conclusions revised as changing trends are established. This is particularly so regarding "long range" enrollment forecasting and the enrollment participation rate assumptions upon which such forecasts are based. Stated differently, an element of future enrollment uncertainty is always present since the future course of enrollment is heavily affected by both trends and public policy. *And, in many critical areas of postsecondary education, public policy is often formed in reaction to change rather than in anticipation of things to come.*

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*The ratio method of forecasting is where an externally forecasted base population figure is multiplied by an estimated ratio to produce a projection for a future time period. In this case the forecasted population age groups by sex were multiplied by the estimated participation rates to yield enrollment estimates by age and sex.

Consequently, the intention of this chapter is to focus attention on specific long range policy issues that result from the present condition of postsecondary education in Washington State (see Chapters 1, 2, and Appendix A) and the long range enrollment forecasts detailed in Chapter 3. *What policies should be made and who should make them are the questions raised by this entire report--a question to be answered by executive, legislative and educational leadership.*

THE CHANGING EDUCATION ENVIRONMENT. Within the past decade, demographic, social and economic changes in society have altered the clientele groups of postsecondary educational institutions. The most salient changes are the relative increases in the number of older students and female students attending college. Increasing amounts of leisure time, an increasing preoccupation with adult education and life-long learning, the retraining related to midcareer shifts, and the economic benefits related to career study are but a few of the factors which have contributed to increasing the heterogeneity and complexity of educational delivery. As a consequence, large numbers of students enroll part-time in non-degree credit programs. Institutions, in turn, have accomodated the part-time student by extending educational delivery to off-campus locations and by offering courses at irregular but more convenient times (e.g., during the evening, early mornings and weekends; extension, correspondence and short courses; etc.).

Corresponding to these changes is the tendency for students to delay entering a postsecondary educational institution after completing high school. Inflation and economic costs, the shrinking economic value of a college degree, elimination of the draft and disenchantment with formal education are acknowledged reasons for this trend.

The net effect of an increasing proportion of enrollments comprised of part-time students who are often older than the "traditional" student (age 18-21) is a drop in the average course load. We know, for instance, that credit hour loads are inversely correlated with age and we assume this is because many older students have jobs or other responsibilities

compelling attendance in the evening or at off-campus locations or both which precludes full-time participation. Off-campus students, for instance, average approximately 4 credit hours per term compared to more than 12 for the day on-campus student. As a result of an increased number of part-time students, institutions in Washington have witnessed a disproportionate headcount enrollment growth compared to student credit hour enrollment growth. *Given the enrollment outlook in Washington through the 1980's, it is quite probable that these trends will intensify and result in significant changes (e.g., time, location, format, etc.) in higher education in the decade ahead.*

In addition to these pronounced changes, the past decade has also witnessed the following significant changes in clientele groups, program structure and content, and budgeting for postsecondary education in the state:

1. Minority group enrollment - the number of minority students enrolled in higher education has increased. The rate of increase has been more rapid than total enrollment growth resulting in a change in the mix of enrollment by ethnic categories.

2. Non-collegiate institutions - enrollment in proprietary schools, vocational-technical institutes and on-the-job training programs in industry has grown considerably.

3. Socio-economic background - financial aid programs for students from economically disadvantaged families have reduced economic barriers to higher education thereby contributing to an increase in participation of students from low-income families.

4. Program shifts - course enrollment trends continue to highlight movement toward applied areas and away from the sciences and arts. For example, in the community college system, enrollment in vocational programs has increased more rapidly than enrollment in academic programs resulting in a more even academic/vocational enrollment mix. Similarly, in the four-year institutions there has been an enrollment decline in the social sciences

and humanities accompanied by corresponding increases in business and engineering programs. The undergraduate/graduate mix, however, has remained constant.

5. Contract enrollment methodology - the 1970's witnessed the implementation of a "contract" enrollment system designed to enable the state and the institutions to predetermine the number of students for which resources would be provided. Under this system the state agrees to provide financial resources for a certain number of students and the institution agrees to manage its enrollments to a predetermined level. Estimated enrollments are converted to student credit hours by course level and equated to a faculty staffing formula. This process results in specifiying the number of formula faculty used as the controlling factor in the contracts for each institution (CPE, 78-3, 1977).

6. Higher education expenditures - expenditures for higher education have increased considerably since the 1969-71 Bennium. As a percent of the total State General Fund, however, expenditures for higher education have decreased from 17 percent in the 1969-71 Biennium to 14.9 percent during the 1975-77 Biennium. This change signifies the increasing competition for state funds in public service areas other than higher education.

LONG-RANGE ENROLLMENT POLICY ISSUES

From an enrollment/budget perspective, the most salient set of long-range policy issues in postsecondary education concerns the efficient management of future enrollment change (viz., both the <u>amount</u> of growth and the <u>type</u> of growth) anticipated between now and 1990. As we have seen in the previous chapter, enrollments are expected to increase to 1981 followed by a period of stability. The anticipated headcount enrollment growth, however, is expected to amplify recent trends regarding the changing mix of students (e.g., age, sex and student credit hour loads) which in turn affects the type of delivery, program offering, facility useage, and capital and operating appropriations.

THE MANAGEMENT OF ENROLLMENT GROWTH. Historically the state has been somewhat reluctant to directly involve itself in the "management" of enrollment change within or between state institutions. In large part, this was because of the phenomenal enrollment growth that occurred during the "golden era of higher education," (i.e., 1950's through the early 1970's). The demand for educational services was high and the state responded to this demand by focusing on budget mechanisms to fund enrollment growth. Differential growth occurred, however, resulting in significant differences between institutions in programs, facilities, and support funds. Whether by accident, design or a combination thereof, it can be concluded from the evidence reported in earlier chapters that the state's postsecondary educational network evolved during this era into a delivery system that was *responsive* to the needs of the citizenry, geographically *accessible* to most of the state's population, and *diverse* in its program structure and content.

Since 1973, however, the demand for educational services has been changing. Without jeopardizing the predominant and well-established roles and missions of each institution (see Appendix A), the need exists to coordinate the future direction separate institutions should take to meet this demand. This need is particularly acute with regards to the future development and delivery of off-campus programs. For example, in order to avoid the unnecessary duplication of educational services within the same region of the state, efficiently utilize existing physical plant facilities, and develop and deliver cost-effective off-campus programs, a strategy of coordination and cooperation between the separate sectors of postsecondary education is required.

In this regard, it is particularly important that specific issues related to managing enrollment growth be addressed now, prior to the onset of enrollment stability. Based on long range expectations and goals, there is a sense of immediacy to short-range planning and budgeting. Alternatives and strategies for the long range need to be incorporated into short range planning, budgeting and decision-making. For example, because of anticipated declines in the "traditional day on-campus students" and the increasing demand for expanding programs and courses for older off-campus

students, educational delivery services are expected to continue to change in a manner which reflects this market demand. As a result of institutional differences and competitive advantages in the open market, it is likely that future enrollment distributions will be imbalanced and that uneven growth between institutions will persist. The alternative is to manage enrollment growth and change through (1) institutional closure(s) and/or (2) differential growth controls which affect enrollment distributions geographically and programmatically.

Although enrollment stability is forecast for the 1980's it is important to acknowledge, at this point, how changing educational demand relates to the alternative of institutional closure. Stated simply, there is an anticipated decrease in the number of traditional day on-campus students. When the enrollment forecasts presented in Chapter Three are examined by age, the 18-24 category is expected to shrink by approximately 11,500 students during the 1981-90 decade (see Figures 3.5 and 3.6). This decline is greater than the current size of a regional university. Based on trend data, this decline will impact day on-campus enrollments the most, particularly in the four-year schools. Furthermore, this decrease is expected to occur at a time when there are increasing demands for state funds by other service agencies.

This enrollment shrinkage, however, is expected to be compensated for by significant gains in older part-time students: the forecast details an increase of approximately 33,000 students over the age of 24 during the 1981-90 decade. The increasing numbers of older students, however, are not likely to be *replacements* for the diminishing day on-campus enrollments. Instead, they are expected to impact further the already expanding off-campus out-reach programs. Older students are also likely to require educational programs and courses that differ in content from the traditional day on-campus programs. If this demand is met, the delivery of educational services should undergo significant changes in the 1980 decade.

Such counterforces and shifts in the growth patterns of higher education represent difficult dilemmas for educational planning. Of the possible

solutions to declining day on-campus enrollment, *institutional closure* is frequently discussed. Unfortunately, this alternative is both complex and untested: only rarely has a public institution of higher education been closed in this country and consequently there is a lack of experience regarding the processes, procedures and impacts related to closure. At a minimum, careful analysis is required that evaluates which, if any, of the institutions should be closed? What will be the primary, secondary and tertiary effects to the social and economic conditions of a community or region when an institution is closed? What is to be done with the existing physical plant facilities---can they be transformed and utilized differently? Can they be sold? What are the legal implications of phasing out tenured/contracted employees when an institution is closed?

These types of questions indicate the importance of establishing a task force to evaluate the merits and problems associated with closing one or more of the institutions. Until such evaluations are undertaken any recommendations for closing an institution are, at best, premature.

The second alternative, *differential growth controls to redistribute enrollment*, also aims at strengthening fiscal mangement while simultaneously enhancing each institution's capacity to adjust to the enrollment changes and uncertainties implied in the forecasts. Under existing conditions there is considerable variation between institutions with respect to attractiveness: educational programs, faculty, location, facilities, etc. vary considerably. The capacity to differentially attract students is likely to be heightened, particularly among the four-year schools, during the 1980's unless the state enters into a program that induces disproportionate growth at underutilized campuses.

The focus of this second alternative, then, is on the management of future enrollment growth in order to more efficently utilize existing facilities while maintaining educational delivery throughout the state. Given the present contract enrollment methodology the following mechanisms and strategies could serve this end.

1. Enrollment ceilings - some institutions are presently operating at near maximum capacity while others are underutilized. An evaluation of the utilization of existing facilities and extensiveness of current programs could be used as initial criteria for establishing ceilings. Other criteria should also be assessed. If adopted, the use of ceilings could assume a no-growth-in-enrollment funding policy for schools with ceilings and a growth-in-enrollment funding policy for the others. Based on present conditions this strategy might be explored for the University of Washington and Washington State University. Particular attention should be given to the advantages and disadvantages that would come from stimulating a disproportionate amount of day on-campus enrollment growth at The Evergreen State College and Central Washington University.

   In conjuction with the SBCCE, the advisability of establishing ceilings in certain community colleges could also be explored and evaluated.

   Furthermore, symbiotic relationships between specific four-year schools and community colleges could be detailed to determine if enrollment ceilings are likely to alter enrollment patterns between systems *within a regional area*. For example, a ceiling at the University of Washington might result in redistributing enrollment to surrounding community colleges that are already impacted to near maximum capacity.

   Previous to the establishment of ceilings, the following types of issues deserve attention:

   a. The identification and specification of criteria used to establish ceilings.

   b. Should ceilings include total enrollments or should off-campus credit hours be excluded? If excluded, what controls, if any, should be placed on off-campus programs and courses? Should off-campus

credit hours be funded separately from the on-campus? How is this to be monitored?

c. Which measurement of enrollment (i.e., headcount, FTE, student credit hours, or faculty entitlement) should be used to establish ceilings?

d. Are ceilings to be established on a quarterly basis or in terms of annual average?

e. What fiscal penalties would be attached to over-enrollment?

2. Coordination of admissions and transfers - if enrollment ceilings are established for the purpose of enrollment redistribution, then students denied admission/transfer status at the institution of their first choice could be referred to under-enrolled institutions. Mechanisms and criteria for inter-institutional referral could be developed to insure that accessibility to the total system is maintained. To be effective, however, a referral procedure requires tracking and/or monitoring.

3. Centralization of admissions and transfers - to facilitate inter-institutional planning and control, all admissions (i.e., new student, former students. and transfer students) could be processed from a central location. Criteria for admission (e.g., GPA., in-state student residence, student preference, desired program specialization, etc.) could be standardized to eliminate some of the variation that currently exists in accepting new admissions and transfers. Furthermore, centralization might help to eliminate some of the uncertainties and imbalances created when one or two institutions over-enroll in new admissions.

Whether admissions and transfers are coordinated, centralized or left in their present form, existing condtions and the outlook for future

enrollments make it necessary to (1) evaluate the extent to which the "open door" policy in the community college system should be maintained, (2) review and standardize the transfer eligibility of community college students to public four-year schools, and (3) evaluate the concept of the community college as a "feeder school" to the four-year institutions. By intention the State of Washington established "community" colleges rather than "junior" colleges for the purpose of meeting local educational needs and demand. Given the shifting age structure and the increasing participation of females and older students in postsecondary education on a part-time basis, one of the most important questions facing the state concerns the delivery of educational services to older students. Are some sectors of higher education (i.e., community colleges, state college, regional universities, or universities) better situated than others to deliver educational services to this expanding client group? Will the demand for educational services alter to correspond with these shifts in student characteristics? To satisfactorily answer these questions requires ascertaining the *type and extent* of educational service sought by the older, part-time student.

MANAGING THE TYPE OF ENROLLMENT GROWTH. Because of the methodology used to forecast enrollment, it is possible, ceteris paribus, to ascertain the proportion of older students expected in the future. An examination of the forecast by age indicates the 18-24 age categories will peak in 1979 for the four-year institutions followed by enrollment decline. The community college growth in the 18-24 age category peaks approximately two years later and then declines. Thus, the traditional day on-campus students do not represent growth areas throughout the forecast. The remaining age categories, however, particularly the 30 and over, show significant enrollment increases throughout the forecast period. This is especially the case for community colleges (see Figures 3.5 and 3.6). As noted previously, these differences in the expected enrollment growth by age are the result of both (1) a changing age structure in the population, and (2) changing participation rates by age.

The consequence of these expected enrollment age changes is profound; in response to existing conditions and future anticipations, institutions have already begun to alter the way they do business by expanding their

off-campus and out-reach programs. The magnitude and type of program changes and delivery services related to the older student have emerged suddenly and rapidly resulting in institutional competition and duplication of services within the same service area (i.e., primarily the metropolitan areas of King, Snohomish and Pierce Counties).

The enrollment forecasts assume a continuation of these changes in the client mix at public institutions resulting in an increasing number of older students participating part-time in non-degree programs. Corresponding to the population growth areas, the increased demand for adult education is expected to be concentrated in metropolitan areas along the I-5 corridor, Tri-cities, and Spokane. The extent to which "life-long" educational opportunities are to be provided by the state, however, needs clarification and policy development. In this regard, adult education represents one of the most salient long range enrollment issues confronting the state. The continued evolution of the life-long learning concept and subsequent educational activities related to program development and opportunity requires policy decisions on (1) any limitations or restrictions regarding enrollment growth for this client group, (2) any limitations on the development of additional out-reach programs and/or courses specifically related to life-long learning, and (3) identification and designation of which sectors of postsecondary education are best suited to deliver educational services to life-long learners.

At present, much of the educational activity related to life-long learning is structured to occur in off-campus locations and during the evening. The community colleges provide much of this service, although Central Washington University and to a lesser extent Eastern Washington University and The Evergreen State College have recently increased off-campus delivery to part-time students.

Some of the recent growth in off-campus programs undoubtedly results from the existing budget formula used in higher education finance in this state; the budget process induces/stimulates enrollment growth.

For example, under existing budget definitions and procedures, off-campus courses are counted in the operating budget "if the courses are offered for credit and taught by regular faculty as part of their teaching load." *As a result, a certain proportion of the off-campus growth that is occurring may represent contrived (i.e., created) rather than real demand.* That is, a "smorgasbord of off-campus course offerings" have emerged throughout the state, which may or may not be related to major campus-based programs. Furthermore, the continuity of sequential courses in various off-campus programs is not well established and the extent to which these course offerings represent real versus contrived demand remains to be determined.

Given these considerations and the potential for enrollment growth by age clusters, the state faces the difficult decision of determining the extent to which off-campus programs aimed at older clientele groups should be state supported as opposed to self-supporting. What are the limits of state support for part-time off-campus enrollment growth? Should guidelines and parameters be established to manage future expansion in this area? Should geographic service areas be established to avoid problems of duplication and competition between institutions? What level and type of coordination should be established between public and private institutions operating within the same geographic service area?

Rather than confront the life-long learning issue directly, an alternative approach is to remove the budget incentives related to contrived demand in the off-campus and out-reach programs. This could be accomplished by withdrawing funds for off-campus programs/courses that are not integrated into campus-based degree programs. All other off-campus and out-reach courses offered by an institution could be made self-supporting. Consequently, they should contract or expand on the basis of real demand and market conditions rather than budget incentives and/or survival strategies.

In essence, this strategy is a two-edged-sword in that it indirectly confronts the horrendous problem of providing educational services

to an aging population at the same time it provides guidelines and budget support for expanding/contracting off-campus programs and courses. The impact of this strategy is likely to reduce the overall enrollment growth contained in the forecast--especially the growth occurring in the "over 30" age category--resulting in some enrollment decline during the 1980's rather than enrollment stability.

FINANCING HIGHER EDUCATION: The Impact of Demographic, Enrollment, Economic and Social Trends. The decline in the rate of enrollment growth is only part of an interrelated set of social trends that impact the financing of postsecondary education. Any attempt to examine the effects of enrollment change without reference to this broader set of trends fails to recognize fundamental finance issues in postsecondary education. These broader trends include (1) demographic changes, (2) changes in student enrollment rates, (3) fundamental shifts in the economy, and (4) the changing social priority assigned to postsecondary education (Schmidtlein and Popovich, 1977).

These trends are to be distinguished from short term factors (e.g., new methods of financing or budgeting postsecondary education, student unrest, change in administration, failure of the wheat crop, etc.) which may depress or enhance revenues in any particular year. These latter factors are viewed as perturbations of long term revenue trends that will gradually yield to the more fundamental forces of society.

1. The impact of demographic trends - as noted previously, the changing age structure in Washington is expected to alter the demand for "traditional" postsecondary education. As enrollment stabilizes (and perhaps declines at certain institutions) during the 1980's and enrollment growth ceases to be the justification for budget increases, it is likely that institutions will seek alternative bases for justifying budget increases. The experience of states already encountering enrollment stability/decline has shown two areas in which budget increases have been sought: (1) funds for new services (e.g., new programs and special programs to assist particular student populations), and (2) funds for improving the quality of

existing programs. *Given the enrollment outlook for Washington, it is recommended that research be generated during this biennium (1977-79) which (1) evaluates the added value of budget increases based on the above reasons, and (2) explores additional areas in which budget increases are likely to be sought in the future.*

Population growth patterns and migration trends in Washington are also likely to result in some campuses growing, some remaining stable and still others contracting (i.e., the problem of enrollment distribution discussed earlier.) Because some regions of the state (e.g., the interstate five corridor, tri-cities area, and Yakima Valley-Columbia Basin areas) are expected to increase more than the rest of the state, it is probable that institutions located in these areas will be impacted the most, particularly when it holds that the strongest predictor of student choice is proximity. Moreover, as the cost of education increases to the student, the proximity factor is likely to increase in importance. Consequently, the state is faced with the prospect of demands for new programs and facilities at growing institutions while other buildings will be underutilized and programs under-enrolled at declining campuses unless policy is generated that controls enrollment distributions in the future. *On this basis it is recommended that a detailed study be undertaken that examines future enrollment demand by geographical area.*

Should differential demographic growth continue to occur by geographic area, the state is left with difficult choices. Financing new construction and creating new programs requires additional state revenue. On the other hand, the imposition of enrollment ceilings aimed at redistributing students requires reversing trends that led to students not selecting under-enrolled campuses in the first place. These alternative strategies need to be researched and evaluated in terms of the state's postsecondary educational goals (i.e., access, diversity, responsiveness and coordination) and cost-effective criteria.

2. The impact of changing participation trends - as noted earlier, the stability of participation trends is uncertain. As a result, the commitment of state revenues to current trends always runs the risk that facilities will be constructed and programs developed in the wrong locations should current trends discontinue or reverse direction. Of the trends reviewed earlier, the following have particular relevance for post-secondary education finance.

   a. Part-time participation trend. The rapid increase in part-time participation is the result of a number of interrelated trends (e.g., changing age structure, in-service training requirements, drop-in drop-out phenomena, female participation, previous education attained, previous experience with higher education, off-campus offerings, and so on.) Part-time students, regardless of age and sex, enroll in institutions located near to their homes and/or jobs. As a result, this trend has profound financial implications for institutions that enroll a high percent of part-time students (i.e., community colleges). For example, commuter schools, as compared to residential institutions, do not require the additional funding for dormitories and other auxillary facilities such as health, recreation, and counseling centers required on residential campuses.

      Given the trend toward part-time enrollment, then, studies are desperately needed that compare the costs of educating part-time students with costs associated with full-time attendance at a residential institution. If there are differences in costs, then the trend toward part-time students will significantly affect future revenues required.

   b. Participation by type of institution. All of the trends discussed earlier have differential effects

on enrollment growth in the public four-year schools, private colleges and universities, community colleges and vocational-technical institutes. This is especially so with respect to part-time enrollment. In Washington, as in the rest of the nation, the two-year institutions appear to be profiting most from these long-term trends. They are located close to potential students, have a tradition of serving older students, are geared to part-time enrollment, generally are less expensive, and have shown an ability to adjust quickly to new demands (Schmidtlien and Popovich, 1977).

The Evergreen State College and the three regional universities (CWU, EWU and WWU), on the other hand, have relied more on full-time residential students, on-campus course offerings and liberal arts programs. Consequently, these institutions are the ones most likely to be negatively impacted by the current trends. Faced with the possibility of enrollment decline, these institutions have recently increased their efforts to attract older students who pursue part-time studies in off-campus locations. This change is most noticeable at Central Washington University.

By virtue of their prestige nationally, the University of Washington, and to a lesser extent, Washington State University have a competitive advantage in attracting students. During enrollment stabilization, they are least likely to be impacted negatively. Being in a large urban center, the University of Washington is in an especially favorable environment should it move toward increasing part-time enrollment to compensate for declines in full-time students. Neither institution, however, is presently increasing off-campus programs funded through the operating budget.

c. Participation by type of academic program. During periods of significant enrollment growth, shifts in enrollment by discipline or program area occurred but were generally manageable because most programs were growing, albeit not at the same rate. Consequently, most programs were generally flexible and adaptable to student demands and market conditions. During enrollment stabilization (or decline), however, enrollment shifts between programs are likely to pose difficult adjustment problems for institutions - retrenchment in declining programs is inevitable.

The high rate of tenure in public institutions in Washington (74.2 percent) is expected to further exacerbate program inflexibility in the future. Faculty imbalances are likely to occur as institutions are faced with maintaining excess faculty and facilities in declining programs at the same time expanding programs are understaffed and located in cramped quarters. High tenure rates are also expected to preclude management's flexibility to use tenure to attract and/or maintain new talent (e.g., new ideas, research, specialization, etc.) to enrich an expanding program. The end result may well be one of program inflexibility which negatively impacts departments and leads to "intellectual stagnation".

If the quality of programs in higher education is to be maintained, budget formula may need to be modified or adjusted to counter these types of problems. Further, alternative mechanisms to employment security for faculty (e.g., tenure <u>with</u> accountability, replacement of tenure with procedural due process, replacement of tenure with renewable and negotiable contracts) could be utilized to maintain program flexibility during budget and enrollment retrenchment.

3. The impact of economic trends and the changing social priority assigned to postsecondary education - a review of economic performance in the nation indicates two years of continued expansion since the severe depression of 1975. Moreover, during 1977 the state's economic performance exceeded the nation in employment growth, wage and salary disbursement growth, and personal income growth. Based on this performance, the economic forecast for the 1978-85 period for the state is one of "solid growth" (OFM, 1978).

   A number of important changes in the characteristics of the economy are occurring, however, that have implications for postsecondary education finance in the state. These include (1) continued high inflation since the late 1960's, (2) an increasing reliance on state as opposed to federal funds for financing higher education, (3) a growing competition and demand by other public service agencies for state expenditures, (4) increasing costs for higher education, and (5) a decrease in the "economic benefits" associated with graduation from college. Taken together, *these changes have signaled a decrease in the priority of higher education in the public mind.*

   These conditions and trends have evolved into a situation in which public higher education is more closely scrutinized than previously. Accountability, which aims at establishing quantifiable measures of effectiveness and efficiency, particularly with regards to higher education finance, has become common. Performance audits, fiscal audits, management audits and student outcome measures are being utilized with increasing frequency to evaluate state spending in higher education. From a finance point of view, the increasing emphasis on accountability measures in education is best understood through the following types of questions:

a. Are the funds and manpower devoted to postsecondary education in proper balance with those devoted to other social objectives? Given the changing age structure of the population the demand for social services is also changing. An evaluation of social objectives and the establishment of priority spending in relationship to these changing demands is required at the state level.

b. Under these conditions and during a time of limited state resources, should those individuals who benefit directly from postsecondary education assume a larger share of the cost? Should tuition and fee increases correspond with rising costs of living or should a user's fee concept (charge per student credit hour) be instituted?

c. Should there be a differential fee structure associated with different types of educational services and programs? In other words, should some types of education be more or less expensive to the recipient than others? Should the state subsidize all educational programs equally?

d. Is the mix of resources devoted to postsecondary education efficient in terms of desired purposes? In other words, are the expenditures for facilties, equipment, and salaries in proper balance to accomplish educational objectives?

e. Are the revenues devoted to postsecondary education efficiently managed? Are faculty utilized efficiently? What workload standards exist and/or should be developed in higher education?

f. Are there better ways to finance higher education than through the enrollment driven budget formula presently in use?

State level finance issues, like the above, are expected to become increasingly important as enrollment stabilizes or declines and the trend toward accountability in public postsecondary education increases. For instance, a number of studies within the past decade have shown decreasing rates of return for a college degree, and the job market for college graduates has been depressed for several years (Freeman, 1976; Bird, 1975). These facts have prompted some to conclude that we are educating a larger proportion of the society than is needed which has, in turn, increased the trend toward accountability. This conclusion, if accurate, is likely to exacerbate finance decision-making during the 1980's when enrollments will stabilize but will also be characterized by a significantly larger pool of adult learners. Obviously, evaluations and decisions related to funding "adult education" and to financing education during a period of enrollment stability require planning and adjustment now.

Finally, it is noted that within the past ten years many independent colleges and universities, in an effort to remain financially solvent, (1) changed their educational mission to increase enrollment, and (2) sought state and federal financial assistance. Given the enrollment outlook for higher education it is reasonable to assume that these trends will continue.

It is also reasonable to assume the state will find itself in a "zero-sum game" regarding financial assistance to the private sector of higher education. Either indirectly (e.g., where enrollment shifts from the private sector to the public sector because of cost difference, closure of private institutions, etc.) or directly (e.g., through financial aid) the state is likely to be faced with increasing support to the private sector. Should the aid going to independent institutions come out of the total funds potentially available for higher education it will further reduce the funds available for public institutions.

SUMMARY. The long range enrollment outlook for postsecondary education poses a number of policy issues that require the attention of state

leadership. This chapter has identified certain issues which seem most consequential for the state as a result of (1) the enrollment forecast and (2) expected changes in the characteristics of students and the postsecondary educational environment. Given these anticipated changes, the following policy issues were detailed:

1. Should the state manage enrollment growth between now and 1981 in order to:

   a. insure the maximum utilization of existing facilities and programs throughout the 1980's?

   b. stimulate institutional adaptability to a period of enrollment stability (1981-1990)?

   c. increase the correspondence and exchange between the different sectors of postsecondary education?

2. Should the state manage the "type" of enrollment growth (i.e., adult learners engaged in part-time off-campus non-degree credit programs) which will occur during the 1980's? The extent to which the state will fund adult education, life-long learning and educational re-tooling represents one of the most significant set of long range policy issues confronting state leadership at this time.

3. In addition to the financial implications in the above, should the state:

   a. change from the existing contract enrollment methodology of the present budget formula to a methodology less sensitive to enrollment growth (e.g., economic conditions, employment, placement of graduates, etc. are alternative considerations)?

   b. adopt in the budget formula criteria which allow for program change without enrollment growth?

c. provide funds and incentives for "improving" the quality of existing programs?

d. require those who benefit from public postsecondary education to assume a greater share of the cost (e.g., tuition increases, user's fee concept, etc.)? Should this vary by type of program?

Given the social, economic and demographic changes anticipated for this State, it is essential that executive and legislative leadership address these policy issues. In all probability, postsecondary education in the future decades will be characteristically different from the past. Significant changes in enrollment growth patterns, clientele served, programs offered and delivery modes are likely to occur between now and the year 2000. State leadership must respond to the extent to which these changes represent the best use of public dollars in light of competing services outside of education and priority spending within education. Are these changes to be funded and to what extent?

Although a steady state environment is forecast for the 1980 decade, anything short of this will result in enrollment decline and budgetary retrenchment. Under these conditions difficult public policy decisions will also be required. In this regard, it is hoped that the material presented in this report will prove useful to educational leaders and public officials as they formulate public policy in anticipation of the future.

APPENDIX A

INSTITUTIONS: GOALS, MISSIONS, AND OBJECTIVES*

*The following persons contributed descriptive materials for each of the institutions:

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APPENDIX A

Institutions: Goals, Missions, and Objectives

Interstate comparisons of selected measurements of enrollment, educational attainment, state and local appropriations and certain other aspects of higher education were used in Chapter One to establish the State of Washington's position relative to other states. Provided certain precautions are observed, these comparisons are useful as evaluative benchmarks in identifying both existing accomplishments and deficiencies of the State. However, because states vary considerably in their demographic and socio-economic characteristics it is generally unrealistic to expect them to resemble one another on measurements of higher education. For this reason, we intentionally avoided using the fifty state comparison information as a basis for either evaluating of establishing state goals. Instead, these interstate comparisons represent the beginning of a contextual framework for viewing the accomplishments and activities related to the delivery of postsecondary educational services in Washington.

In an effort to expand this contextual framework, the intention of this section is to focus on the delivery of postsecondary education within Washington. In general, state goals are identified and descriptive information provided which enable one to evaluate the extent to which the state is accomplishing its goals. This same information provides the background for the enrollment forecasts and assumptions thereof that appear in Chapter Three. The contents of the Appendix include (1) goals for Washington Postsecondary Education, and (2) descriptions of post-secondary institutions in Washington including their history, organization, institutional mission and roles, salient activities and most current enrollment profile. In the latter instance, these descriptions were submitted by the various institutions.

GOALS FOR POSTSECONDARY EDUCATION IN WASHINGTON

In May, 1976 the Council for Postsecondary Education detailed a comprehensive state plan for postsecondary education in Washington. Four major goals were identified and elaborated: RESPONSIVENESS, ACCESS, DIVERSITY, AND COORDINATION. These four educational goals are the framework around which the Council's first comprehensive state plan developed, a plan which represents the culmination of several staff studies, advisory committees and responses from the academic community and the public during various stages of review. The goals are listed below as essential ingredients related to the assumptions about future enrollment in postsecondary educational institutions in the state:

I. Responsiveness. Postsecondary education must respond to the full range of adult educational needs in Washington society. Such responsiveness involves the provision of education for cultural and value enrichment and employment. Education beyond high school must encompass formal approaches while providing alternative experiences for those seeking or needing non-traditional opportunities. Program quality standards appropriate to each level and type of education must be a constant concern.

II. Access. Access to education for all persons beyond high-school age who desire it and can benefit from it is a basic goal.

III. Diversity. Open access, responsiveness, and commitment to individual enhancement through education presume a variety of institutions and program options as well as the utilization of all educational resources. Within the limits of feasibility, such variety should be provided in Washington.

IV. Coordination. Responsiveness, access and diversity, in concert with the achievement and maintenance of high standards of excellence in postsecondary education, require the coordination of all educational resources. Such coordination should emphasize improved services to the public within a context of financial feasibility.

POSTSECONDARY EDUCATIONAL INSTITUTIONS IN WASHINGTON

Postsecondary educational services in Washington are delivered by two public research universities, three public regional universities, one state college, twelve accredited private colleges and universities, twenty-seven public community colleges, five public vocational-technical institutes, and approximately 340 proprietary (i.e., private vocational) schools. More than twenty "out-of-state" schools offer courses, programs and/or degrees (e.g., B.A., B.S., M.A., M.B.A., and Ph.D.) within the state. In addition, a vast array of "Learning opportunities" exist that provide a wide variety of postsecondary educational experience. The Experimental College, sponsored by the Assoicated Students at the University of Washington, is an example: enrollment last year exceeded 6,000 students per quarter involved in courses which ranged from "the art of cartooning" and "statistics according to SPSS" to "early morning twice weekly Hatha Yoga and do-in rejuvination self-massage".

Obviously, the scope of the postsecondary enterprise is very broad, and it is not the intention of this report to cover all components as they operate within the State of Washington. For very practical reasons, including the need for relatively firm data on enrollment and student characteristics, the primary focus of this report is concerned with state supported postsecondary education (i.e., public four-year universities and college, and the community colleges). Where data are available, information regarding private four-year colleges and universities, proprietary schools and public vocational technical institutes will be included.

The approximate location of each public and private four-year university and college and each public community college is illustrated in Figure A.1. In addition, five vocational technical institutes are located in Pierce (2), King (2), and Whatcom (1) counties. Given the geographic distribution of the state's population it is concluded that most of the state's citizens are within relatively easy commuting distance of at least a two-year campus.

Table A.1 details the headcount enrollment at each of these institutions for Fall, 1976. A comparison of the public and private sectors indicates a significant proportion of the responsibility for delivering post-secondary educational services is assumed by the state: 91 percent of the total enrollment in higher education is delivered by state supported institutions. An examination of the Governor's budget for 1978-79 further indicates the commitment and support of the State to higher education: $389.9 million dollars or 17.7 percent of the General Fund has been allocated to higher education.

COLLEGES & UNIVERSITIES BY COUNTY

CHELAN COUNTY
- o Wenatchee Valley Community College

CLALLAM COUNTY
- o Peninsula Community College

CLARK COUNTY
- o Clark Community College

COWLITZ COUNTY
- o Lower Columbia Community College

FRANKLIN COUNTY
- o Columbia Basin Community College

GRANT COUNTY
- o Big Bend Community College

GRAYS HARBOR COUNTY
- o Grays Harbor Community College

KING COUNTY
- ● University of Washington
- x Cornish Institute of Allied Arts
- x Northwest College
- x Seattle Pacific University
- x Seattle University
- o Bellevue Community College
- o Green River Community College
- o Highline Community College
- o Seattle Central Community College
- o Seattle North Community College
- o Seattle South Community College
- o Shoreline Community College

KITSAP COUNTY
- o Olympic Community College

KITTITAS COUNTY
- ● Central Washington University

LEWIS COUNTY
- o Centralia Community College

PIERCE COUNTY
- x Pacific Lutheran University
- x University of Puget Sound
- o Fort Steilacoom Community College
- o Tacoma Community College

SKAGIT COUNTY
- o Skagit Valley Community College

SNOHOMISH COUNTY
- o Edmonds Community College
- o Everett Community College

SPOKANE COUNTY
- ● Eastern Washington University
- x Fort Wright College
- x Gonzaga University
- x Whitworth College
- o Spokane Community College
- o Spokane Falls Community College

THURSTON COUNTY
- ● The Evergreen State College
- x Saint Martin's College
- o Olympia Technical Community College

WALLA WALLA COUNTY
- x Walla Walla College
- x Whitman College
- o Walla Walla Community College

WHATCOM COUNTY
- ● Western Washington University
- o Whatcom Community College

WHITMAN COUNTY
- ● Washington State University

YAKIMA COUNTY
- o Yakima Valley Community College

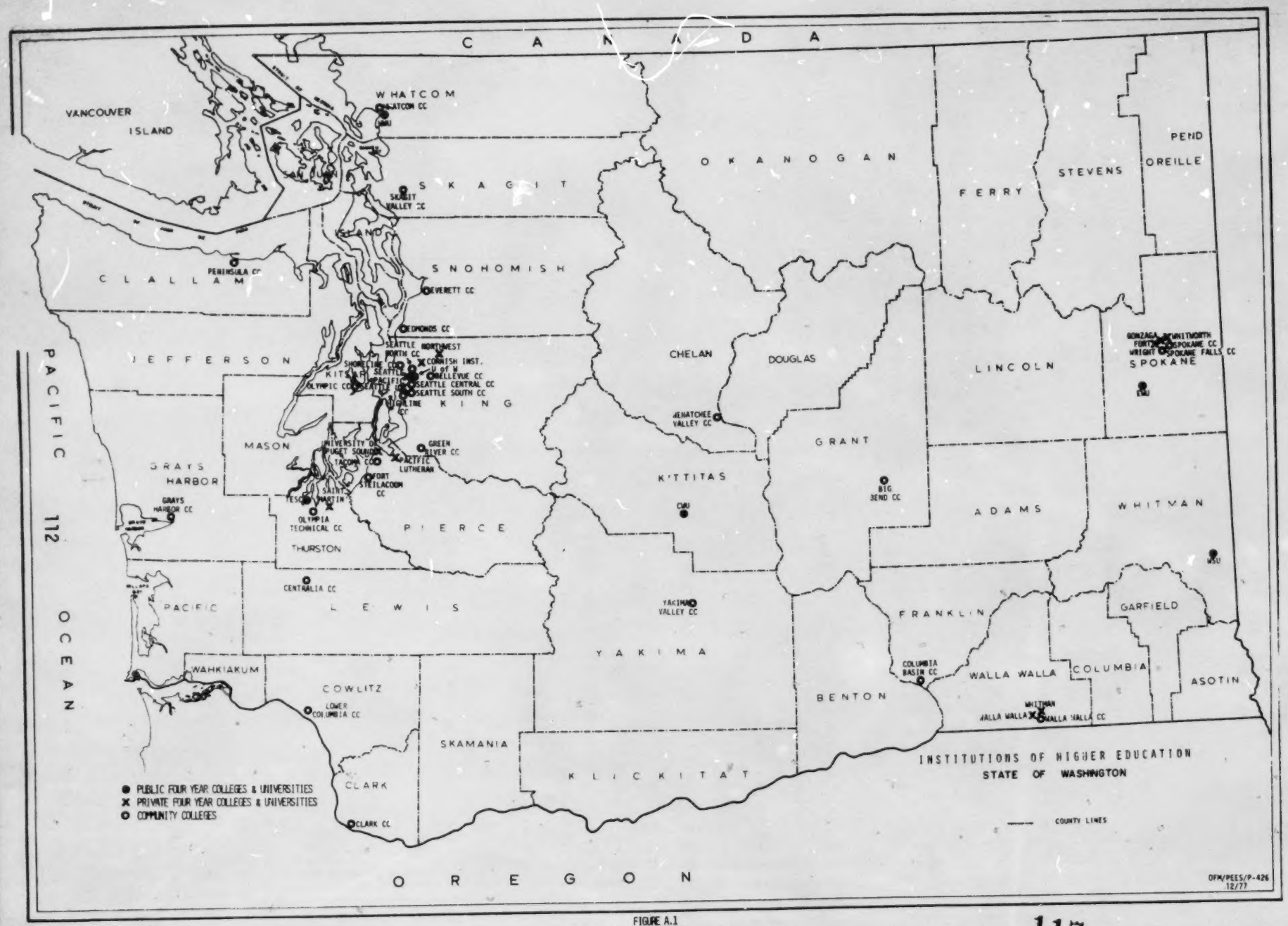


FIGURE A.1
COLLEGES AND UNIVERSITIES BY COUNTY

Table A.1 Fall Headcount Enrollment by Institution, State of Washington, 1976

COLLEGE	HEADCOUNT	PERCENT	COLLEGE	HEADCOUNT	PERCENT
Community Colleges	154,564	60.25	Public 4-year	78,400	30.56
Peninsula	2,579	1.01	U of W	35,277	13.75
Grays Harbor	2,799	1.09	WSU	16,693	6.51
Olympic	7,307	2.85	CWU	7,776	3.03
Skagit Valley	5,137	2.00	EWU	6,895	2.69
Everett	6,921	2.70	TESC	2,636	1.03
Edmonds	5,052	1.97	WWU	9,123	3.56
Seattle Central	8,127	3.17			
Seattle North	6,328	2.47			
Seattle South	5,360	2.09			
Shoreline	7,530	2.94			
Bellevue	7,825	3.05	Private 4-year	23,573	9.19
Highline	8,220	3.20	Fort Wright	385	.15
Green River	6,966	2.72	Gonzaga Univ.	2,726	1.06
Ft. Steilacoom	9,074	3.54	Northwest Coll.	628	.24
Centralia	4,201	1.64	Pac. Luth. Univ.	3,261	1.27
OTCC	2,963	1.15	St. Martin's Coll.	724	.28
Garrett Heyns	303	.12	Sea. Pac. Univ.	2,296	.89
Lower Columbia	3,810	1.49	Seattle Univ.	3,513	1.37
Clark	8,147	3.18	Univ of Puget Sound	5,073	1.98
Wenatchee Valley	2,911	1.13	Walla Walla Coll.	2,005	.78
Yakima Valley	5,164	2.01	Whitman Coll.	1,137	.44
Spokane	7,539	2.94	Whitworth Coll.	1,825	.71
Spokane Falls	11,027	4.30			
Big Bend	2,010	.78	GRAND TOTAL	256,537	100.00
Columbia Basin	5,489	2.14			
Walla Walla	3,601	1.40			
Whatcom	2,490	.97			
Tacoma	5,684	2.22			

In terms of institutional placement in the total structure of post-secondary education, institutions may be described schematically in accord with their relative emphasis on sub-degree level instruction, undergraduate level instruction, graduate level instruction and research, and the extent to which an academic or an applied orientation is stressed in program efforts. The two dimensions, instructional/research level and curriculum emphasis, provide a framework for describing institutions within a general system, as is diagrammed on Figure A.2.

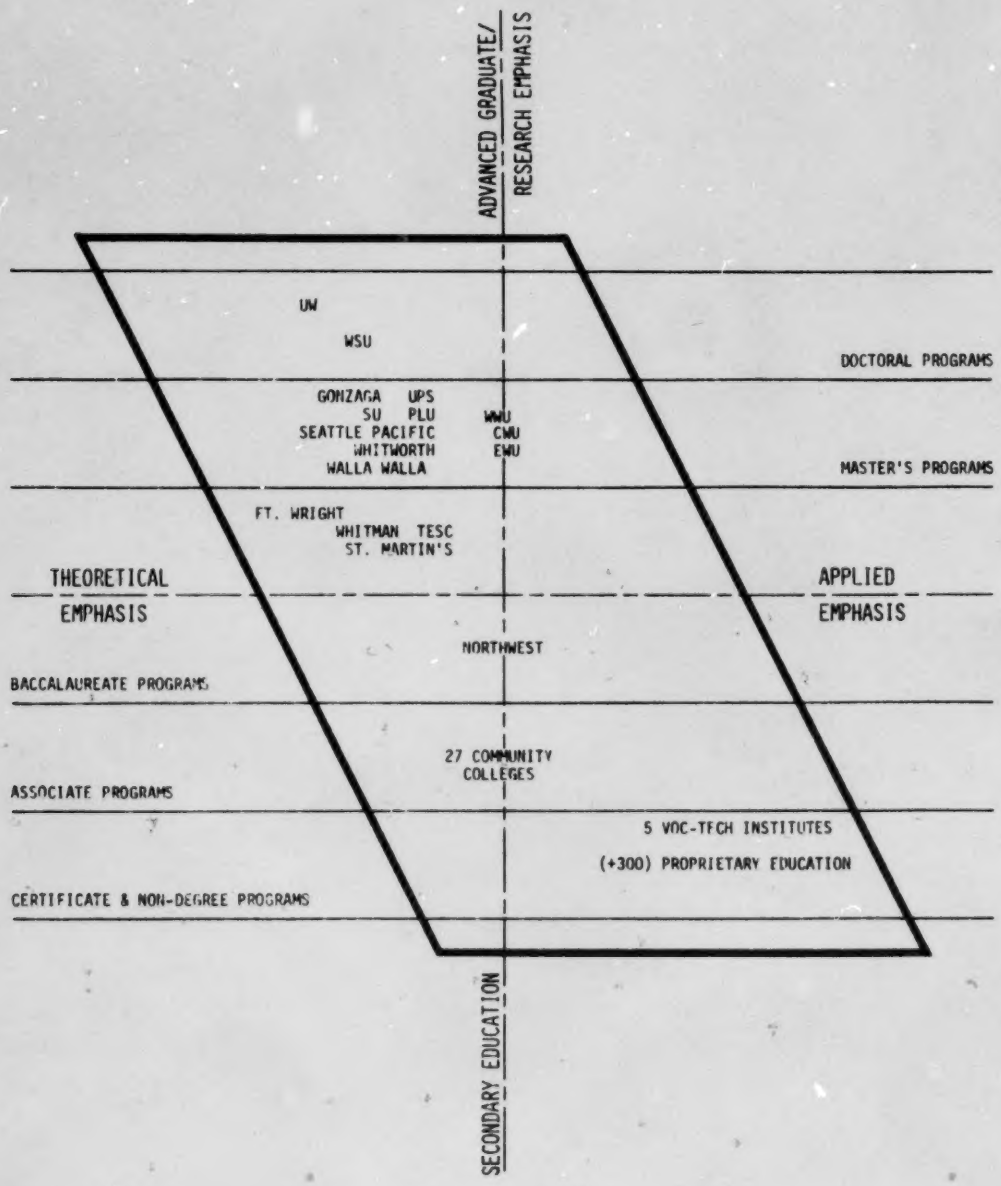
The top of the diagram represents emphasis on graduate education and research, doctoral, and post-doctoral studies. The bottom represents the postsecondary threshold, commencing with certificate or non-degree instructional emphasis. Between are arrayed levels of programs. The second dimension, academic or applied orientation, is represented horizontally, with institutions inclining to academic (or theoretical) emphases placing to the left, and those emphasizing applied knowledge placing to the right. The diagram is tilted to reflect an increased orientation to academic learning as one moves up the instructional spectrum.

The placement of Washington's postsecondary institutions on this diagram illustrates both their general orientations and their functional relationships to each other. Taken in its entirety, the illustration describes the general structure of postsecondary education in this state.

It is clear that the postsecondary education structure in Washington is represented by a variety of institutional types. Beyond this, the system that exists is one that has evolved, and this evolution has been influenced by a combination of public programs policies and programmatic responses dictated by economic, philosophical and other considerations. While new policies and policy modifications are important if the system is to continue its evolution in a coordinated manner, it should be recognized that there is much in the way of functional allocation on which to build. This point will become apparent as the general configurations of the various postsecondary educational components in this state are reviewed. (Council for Postsecondary Education, 1976)

FIGURE A.2

INSTITUTIONS BY
INSTRUCTIONAL/RESEARCH LEVEL
AND CURRICULUM EMPHASIS



115

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THE UNIVERSITY OF WASHINGTON

Founded in 1861, the University of Washington is the oldest state-assisted institution of higher education on the Pacific Coast. Basic statutory authority was acquired in 1861 and expanded in 1889, when the institution was designated as the State University by the First State Legislature. The original mandate of the University was to "provide the best and most efficient means of liberal education in the arts and sciences to men and women of the state".

Subsequent legislation has expanded and clarified the general aims and goals of the University within the framework of the total higher education system of the state. As presently defined (RCW 28B.10 and 28B.20) the instructional role of the University includes: 1) provision of a high quality general education for all students who enroll; 2) provision of both undergraduate and graduate instruction to the highest level in the humanities and in the pure and applied natural and social sciences; and 3) preparation of students for professional practice in a number of fields which are the defined responsibility of the University.

The courses of instruction of both the University of Washington and Washington State University shall embrace as major lines, liberal arts, pure science, pharmacy, mining, architecture, civil engineering, home economics, and forest management as distinguished from forest products and logging engineering which are exclusive to the University of Washington. These major lines shall be offered and taught at said institutions only.

ORGANIZATION. The University is governed by a Board of Regents empowered under state law to exercise full control of the University and its property. The seven members of the Board are appointed by the Governor, with the advice and consent of the Senate, for six year terms or until their successors have been appointed and have qualified.

The University's chief executive and administrative officer, the President of the University, is chosen by and is responsible to the Board of Regents. The President is assisted by the Provost and Vice President for Academic Affairs. The administrative affairs of the University are divided into five major areas of responsibility, under the direction of a Vice President for Health Affairs, Business and Finance, Student Affairs, University Relations and Minority Affairs.

To meet its instructional, research and public service responsibilities, the University maintains six colleges and ten major schools, each headed by a Dean. The Deans of the Health Professional Schools report to the Vice President for Health Affairs, who in turn reports to the Provost and Vice President for Academic Affairs. The remaining Deans report directly to the Provost who in turn reports to the President. The six colleges are Architecture and Urban Planning, Arts and Sciences, Education, Engineering, Fisheries and Forest Resources. The ten major schools are the Graduate School and the Schools of Business Administration, Dentistry, Law, Pharmacy, Public Affairs, Medicine, Nursing, Social Work and Public Health and Community Medicine. A division of Continuing Education, which provides educational and cultural programs outside the regular curriculum, Summer Quarter, and the Joint Center for Graduate Study at Richland are also headed by Deans. In addition, the University operates a number of specialized centers such as the Child Development and Mental Retardation Center and the Alcoholism and Drug Abuse Center.

MISSION. Although the University fulfills a very basic role in society as a base for free inquiry and exploration of ideas, special capabilities exist at the institution which make certain kinds of programs more effective or beneficial than others. State Law (RCW 28B.20.060) specifies that courses of instruction of the University of Washington shall embrace as *exclusive major lines*, law, medicine, forest products, logging engineering, commerce, journalism, library economy, marine and aeronautic engineering, and fisheries.

In view of this fact, the distinguishing educational mission of the University of Washington, is to provide programs of graduate and professional education commensurate with perceived state, regional and national demand, the academic development of the University, the supply of similar programs at comparable major universities, and the needs of University undergraduate programs.

The largest single activity of the University continues to be providing a wide range of high quality undergraduate educational opportunities. These undergraduate activities are of the kind which take fullest advantage of the related academic resources that are jointly utilized in programs of undergraduate and graduate education and research.

With respect to research, the principal mission of the University is one derived from the principle of extending the frontiers of knowledge in those fields of inquiry in which knowledge is being disseminated. The University promotes research activity which directly contributes to the graduate and professional education processes and, at the same time, to undergraduate education. Research activity contributes in several ways: joint faculty/student research activity which may culminate in student dissertations or theses; providing subject material for lectures and seminars; and providing general direction and educational background apart from theses, dissertations or the formal classroom experience.

In the area of public service, the mission of the University recognizes two dimensions of service activities. First are the service activities which are organized into planned and supported programs of public service such as concerts, lectures, conferences and broadcasts. Second are the service activities which result from instructional or research programs, a primary example of which is health care provided as a direct service to residents of the state. Both types of service activity contribute substantial direct as well as indirect benefits to the state and region.

In support of these overall educational missions the University has developed a set of formal goals and policies. These statements, in conjunction with the broad missions, are intended to guide planners at all levels throughout the institution in formulating more specific unit or program objectives which in turn guide the allocation of resources to programs and activities.

The University's basic goal is to act as a base for the free generation and exploration of ideas and for the preservation of the intellectual and cultural heritage of mankind. It is a resource provided by society for use by individuals

in pursuit of the highest scholarly, esthetic and human goals to which mankind can aspire. As such it must both attract and cultivate men and women of high capability and develop their potentialities as human beings. In turn, society can expect to gain from its universities both increasing knowledge and informed, sensitive, vigorous persons prepared to work toward the improvement of man's condition. Towards these ends, the goals of the University are to:

I. Provide for students educational programs of the highest quality including:
   A. instruction at all educational levels appropriate to an institution of higher education including:
      1. a broad range of undergraduate programs.
      2. advanced higher education, comprising graduate, professional, and post-doctoral programs.
      3. continuing education and other alternative educational opportuntities for those not enrolled in degree programs.
   B. a well-balanced curriculum serving all levels of educational program, based on:
      1. instrution in the humanities and in the natural and social sciences including emphasis on the most advanced levels of knowledge providing students with the opportunity to acquire and to continue to expand throughout their lifetimes:
         a. understanding of man and the universe, appreciation of the intellectual and esthetic achievements of mankind, and ability to contribute as informed, rational, sensitive beings to the culture and progress of a changing world.
         b. knowledge, skills and understanding that will help them contribute effectively to identify and solve contemporary problems critical to the enhancement freedom, and to human welfare and survival.
         c. realization of their own personal goals and achievement of their own educational aspirations.

2. training to the most advanced levels of practice in those professions and in the applied and performing arts appropriate and advantageous for the welfare of society in accordance with the responsibilities of the University.

II. Conduct research and promote scholarship, as an essential and unique means of advancing knowledge and understanding and as a basis for instruction, particularly at the graduate and advanced professional levels.

III. Offer society, and in particular the State of Washington, public service activities which include:

A. the knowledge and direct service of its faculty and staff in the identification of problems confronting society and assistance in their solution.

B. information and consultation to local, state, and national governments, business and industry, labor and the professions, and a variety of public and private organizations.

C. cultural and recreational activities and facilities shared with the citizens of the state in a manner consistent with its academic programs.

Activities Related To Mission. A few examples provide an indication of the scope and magnitude of activities at the University. In Autumn Quarter, 1976 there were 35,277 students enrolled for regular academic credit with a full-time teaching faculty of 2,455. In Summer Quarter, 1977 there were 14,993 students enrolled with a faculty of 1,100. During 1976-77, there were 33,000 participants in formal continuing education programs, not including those attending concerts, film series or similar activities. Over 8,800 took non-credit classes on campus; 5,000 enrolled in extension classes, independent study or media courses for credit; and more than 17,000 attended professional conferences, workshops and short courses. Women's programs, residential and statewide programs and community development accounted for the remainder.

Scholarly research and related activities in areas undertaken by formal research organizations funded by the state were conducted by 17 centers and institutes at the University which accounted for more than two million dollars in research volume in 1976-77. Project research consisting of research activities undertaken with the aid of support provided through a contract, grant or specific allocation of departmental resources (for example, cost sharing or release time) accounted for more than $101 million in research volume under the direction of more than 1,000 principal investigators.

In 1976-77, more than 60,000 people attended special events sponsored by the University. The University's television station, KCTS, broadcasted 5,000 hours to an estimated audience of 3.5 million while the FM radio station, KUOW, broadcasted 6,552 hours to an estimated audience of 60,000. The University hospitals accounted for 162,000 inpatient days and 287,000 outpatient visits.

PERFORMANCE EVALUATION. The University of Washington, as one of the nation's large, comprehensive research-oriented universities, fulfills a number of goals and responds to a widely varied constituency. The success of the University's performance is ultimately determined by the effectiveness with which it serves the individual needs of its constituency, and this effectiveness is directly related to the quality of its programs. The University of Washington is recognized as one of the nation's highest ranking educational institutions in terms of the quality of its programs, evidence of which is apparent in many ways:

1. A recent report of the National Science Foundation ranked the University first in the nation in total federal grant and contract activity for fiscal years 1974 and 1975. Federal grants and contracts awarded to the University for training, research, and construction for 1975-76 totaled $88,658,000, a direct reflection of faculty quality.

2. The University's graduate programs were ranked near the top in a recent survey conducted by the American Council on Education.

One department, Physiology and Biophysics, was rated third among the 102 graduate programs covered, only Harvard and Rockefeller placing higher. Other University programs in the top ten in the country were geography, developmental biology, microbiology, zoology, and population biology. In every other graduate field surveyed, University departments were rated either "strong" or "good," none receiving the lower rankings of "adequate," "marginal," or "inadequate." On the basis of the survey, faculty quality is calculated to rank about fifteenth to seventeenth in the nation and about sixth among state universities.

3. Other surveys of selected graduate and professional programs place the University high among other universities in the nation. A survey conducted by Columbia University (Blau and Margulies, 1975) rated the University's programs in Forestry and Nursing as second in the nation, Dentistry as fourth and Medicine as ninth in the nation. Another survey conducted by the University of California at Berkeley (Cartter and Porter, 1977) rated Business as third among public institutions and twelfth in the nation, and Law among the top ten public institutions and top 20 among all institutions.

4. Special recognition of its long-time interest in the development of the rich resources of the sea came when the University was designated by the federal government as one of the nation's first four "Sea Grant Colleges." This year's Sea Grant to the University totals $1,901,300.

5. Washington frequently is one of a very few major universities asked to undertake regional or national training programs. For example, the University recently was selected as one of seven institutions to provide special management training for midcareer executives who are believed to be headed for higher positions in the federal service. It is one of only two American universities selected to instruct career naval officers on active duty in political military affairs and international relations.

6. For the past eight years, the University has been one of the top seven public universities and the top 20 among all universities in the number of National Science Foundation Fellowships who selected the University for their graduate work.

7. The University ranked fifth among public universities and eighth among all universities in the number of faculty appointments to federal advisory committees.

ENROLLMENT. The University of Washington's enrollment was 37,120 in Autumn Quarter 1977. Of the total, 27,993 were undergraduates and the remainder were in professional and graduate programs. More than three-fourths of the undergraduates enter as freshmen from Washington high schools or as transfer students from Washington community colleges or other colleges and universities in the state. The majority of students who enter the University as freshmen are from the top one-third to one-fifth of their high school graduating class. The grade-point average for the regularly admitted freshman class entering in Autumn Quarter 1977 was 3.37.

Table A.2 - Student Mix, Fall 1977
University of Washington

	Percent of total enrollment	Total
Age:		
21 and under	40.9	15,187
22-24	23.1	8,579
25-29	20.9	7,765
30-34	8.8	3,243
35 and over	6.0	2,230
age not indicated	.3	116
total	100.0	37,120
Sex:		
Male	56.1	20,821
Female	43.9	16,299
Sex not indicated	-	-
total	100.0	37,120

	Percent of total enrollment	Total
Residence:		
Washington residents	84.4	31,349
Non-residents	15.6	5,771
total	100.0	37,120
Class Standing:		
Graduate	20.6	7,633
Professional	4.0	1,494
Seniors	16.8	6,247
Juniors	18.1	6,735
Sophomores	14.6	5,406
Freshmen	17.3	6,417
Unclassified 5's	5.2	1,913
Other	3.4	1,257
total	100.0	37,120

WASHINGTON STATE UNIVERSITY

Washington State University was established by legislative act in 1890 as Washington State Agricultural College and School of Science. It was founded in 1891, on land donated by the citizens of Pullman, as the land-grant institution of Washington under the name of Agricultural College, Experiment Station and School of Science. In 1905 the name of the institution was abbreviated to State College of Washington, and in 1959 it was changed again to Washington State University. The University has now grown and diversified into an institution of ten major academic units and a total enrollment of approximately 16,700 students.

It was the explicit desire of the Legislature in establishing the institution that it should excel in science and the "mechanic arts" but should also offer general higher education. From an early point in its history, therefore, the University has included curricula in the humanities and the social, biological, and natural sciences, as well as in agriculture, engineering, home economics and veterinary medicine. The strength of its liberal arts curricula was recognized in 1929 with the establishment of a chapter of Phi Beta Kappa, the first such unit assigned a land-grant institution in the country. It continues to offer degree programs in these areas as well as in other disciplines added since the institution's first years.

ORGANIZATION. Statutory authority for the governance of the University rests with a seven-member Board of Regents. Through a series of actions over the years, the Board has delegated the day-to-day operation of the institution and many policy-making functions to the President. Assisting the President as his principal administrative officer is the Executive Vice President. Responsible to the President and Executive Vice President is the Vice President--Academic with supervision over all instructional and research programs and all extension services through their deans and directors and over the admissions and registrar's office. Reporting also to the President and Vice President is the Vice President--Business and Finance, whose responsibilities include the overseeing of the financial components of the administration and the facility support services of the University. The position of Vice President--Student Affairs is being abolished on December 1, 1977, with the retirement of the

present incumbent, his duties have been assumed by the Dean of Students on at least a temporary basis. The various campus units that provide student support services report to the Dean of Students who in turn reports to the President and Executive Vice President.

The University consists of eight colleges (Agriculture, Business and Economics, Education, Engineering, Home Economics, Pharmacy, Sciences and Arts, and Veterinary Medicine), a Graduate School, and a Hotel and Restaurant Administration Program in Seattle. As the coordinating institution, it participates with Eastern Washington University, Fort Wright College, and Whitworth College in the operation of the Intercollegiate Center for Nursing Education in Spokane. Below the level of the college, the administrative structure is comprised of 50 departments and 14 interdesciplinary programs. Undergrate study is offered in more then 90 fields; Master's degrees are awarded in 59 disciplines; and 40 doctoral programs provide opportunities for the University's most advanced courses of study.

MISSION. The University has the major mission obligations of a comprehensive land-grant institution with essential commitments in the three basic areas of instruction, research, and public service. In all three areas it must provide these services to the campus community and, consistent with its land-grant responsibilities, to the citizens of the State in all its corners.

By statutory authority Washington State university has been assigned a number of "major (academic) lines" and the right and responsibility to develop courses in these subjects to the fullest extent, including at the graduate level. Exclusive major lines allotted to Washington State University include agriculture in all its branches and subdivisions, veterinary medicine and economic science (in its application to agriculture and rural life). Major lines of Washington State University shared with the University of Washington are liberal arts, pure science, pharmacy, mining, architecture, civil engineering, electrical engineering, mechanical engineering, chemical engineering, home economics, and forest management. While these restricted lines have now been abridged to some extent by other State-supported institutions, these statutory assignments describe explicitly certain areas of responsibility of Washington State University as perceived by earlier legislators.

Consistent with its mission, the University has before it the following broad goals:

To provide an educated citizenry through developing individual capacities and cultivating the essential characteristics of an educated person.

To provide a pool of well-qualified personnel to serve the manpower needs of communities, the State, and the nation.

To serve as a dynamic force in shaping society and fostering economic, cultural, scientific, technological, and social progress.

To furnish access to and encourage the utilization of alternative opportunities for education beyond high school through diverse educational programs for varying levels and types of abilities.

To extend, test, and revise knowledge through research and scholarly inquiry and to disseminate the results of such inquiry through extended education, publication, and other means.

To foster excellence in teaching and research by the well-qualified teacher-scholar in the best possible facilities.

To facilitate and stimulate lifelong learning through continuing education of adults.

To utilize the University's resources in providing services with very practical goals to the citizens of the State, to business and industry, to local communities, to State and federal agencies, and to foreign governments which come in search of them.

INSTRUCTIONAL, RESEARCH AND PUBLIC SERVICE ACTIVITIES. As a comprehensive University, Washington State University offers a broad range of degree programs from the baccalaureate through the doctoral levels. The traditional liberal arts disciplines, including the humanities, social sciences, physical sciences, and natural sciences, are broadly represented in the curriculum. Professional training is offered in subjects such as architecture, business administration, criminal justice, education, fine arts, nursing, pharmacy, office administration, radio and television, and speech pathology. Because of its land-grant charter, particular attention is devoted to the several fields of agriculture, engineering, home economics, and veterinary medicine, areas where research and public service are, for the same reason, also especially well developed. In recent years programs in environmental science, Asian studies, Black studies, Chicano studies, Native American studies, literary studies, and women studies have been initiated.

Washington State University does not have an administrative unit exclusively and specifically for the health sciences. As a matter of institutional policy, the health related units have been placed administratively in their individual discipline contexts. The College of Pharmacy, the College of Veterinary Medicine, and the Intercollegiate Center for Nursing Education possess obvious health science foci. Beyond these, every other college but one (Business and Economics) has one or more health-related units. Numbered among these are the Department of Bacteriology and Public Health, the Primate Research Center, research and instructional programs in alcoholism, nutrition, communication disorders, pre-physical therapy, and water and air pollution and curriculum programs in pre-dentistry, pre-medicine, and pre-nursing.

One of the notable elements in the instructional structure of the University is the large number of interdisciplinary programs at both the undergraduate and graduate levels. Although difficult to initiate and operate, requiring special faculty and administrative dedication, they represent an excellent means of probing newly emerging areas of study, of economizing on personnel and material resources, and of providing exciting "cutting-edge" fields to students.

Another noteworthy aspect of the instructional program is the number of internship programs developed in recent years by departments to provide advanced majors with a kind of "hands-on" practical experience to complement their campus-based studies. Self-paced, computer-assisted, and other kinds of innovative learning modes also represent an expanding interest of faculty and students. Instructional experimentation is a constant activity of the institution's teaching departments, often with personnel and resource assistance from the Audio-Visual Center. Courses in genetics, business administration, foreign languages, and psychology--to mention only four areas--make use of a variety of these innovative teaching techniques.

In keeping with the comprehensive character of the University and its land-grant charter, research comprises a major focus of the institution. It addresses economic, social, cultural, and scientific issues, at both the theoretical and the intensely practical level.

All instructional faculty are expected and encouraged, as an integral component of their appointments, to maintain active, non-directed research or creative programs, to keep current in their discipline, to generate new knowledge or artistic achievements, and to apply their findings to improve the quality of their teaching. As with the research faculty, instructional faculty are urged to secure extramural funding in aid of their research or creative activities, State support for research being so limited. A very large number of research faculty are also deeply involved in the instructional process.

Faculty holding designated research appointments engage largely in directed research, both basic and applied, although the two are frequently inextricably intertwined, and are assigned in general to research units that are separately funded by the Legislature or supported as such by special University allocations. For the most part these faculty are on the staffs of the Colleges of Agriculture, Engineering, and Veterinary Medicine. Whether on campus or in the research centers elsewhere in the State, the research faculty in these three colleges are engaged in activities designed to solve problems associated with the production, processing, and marketing of Washington's fiber materials and animal and plant foods; to improve engineering theory and technology and their application to real-world problems, including the

generation and utilization of energy, the development of production facilities from prototype to pilot plants, and the improvement of air quality; and the identification and cure of animal and human disease conditions.

Other research faculty hold appointments in the University's several special research centers: Bioanalytical Laboratory, Computing Center, Electron Microscope Center, Environmental Research Center, Jewett Observatory and University Planetarium, Nuclear Radiation Center, Primate Research Center, Social Research Center, Washington Archaeological Research Center, Water Research Center, various Engineering laboratories, and many specialized research units in Agriculture. Some of these faculty are concerned with particular areas of research, such as resource development, the preservation of the State's archaeological resources, and the study of urgent social problems. The faculty of the Water Research Center, for example, investigate, often at a multi-disciplinary level, basalt aquifers, storm sewers, streamflow in river basins, nitrogen supersaturation, lake water quality, and similar subjects; in 1974-75 they mounted 28 such projects supported by $450,000 in federal, State, and local funding. Still other faculty have as their main--but not exclusive--responsibility the providing of highly technical services to other researchers both within the institution and outside the University system. Such is the case, for instance, with the Nuclear Radiation Center, the Bioanalytical Laboratory, and the Electron Microscope Center.

A very considerable amount of research, both individually directed and University sponsored, is supported by external grant and contract funds from State and federal agencies, from private and governmental foundations, from industry, and still other sources. The steady growth in number of proposals submitted to outside funding sources and in the number and total dollar value of awards has increased from 7 million dollars in 1979 to over 14 million dollars in 1977.

For the enrichment of the campus and city community and to provide learning experience for students in the fields concerned, the University provides a wide range of cultural events and facilities. For example, the University Theatre presents a varied, year-round program of dramatic performances. The Music Department offers yearly more than 100 concerts and recitals by students, faculty, and visiting artists, and sponsors a number of campus orchestras, bands, and choirs. Throughout the year the Performing Arts Coliseum, with a seating capacity that can be modified, depending on the circumstance, from a maximum of about 14,000 seats down to the smallest self-contained theater segment with 1,100 capacity, hosts scores of professional performers of various kinds. Museums of natural history, of entomology, and of anthropology and a new art gallery with rotating exhibits represent additional instructional and cultural resources.

All faculty, to the extent possible, are expected to contribute their professional skills in public service activities when called upon. Three units currently exist explicitly to provide such service.

The Office of Continuing University Studies (OCUS) assists academic departments in providing credit courses for students who find it difficult or impossible to enroll in the regular campus academic program. These courses include campus-based evening classes, off-campus courses and independent study where the necessary facilities are available. Increasingly off-campus classes are presented through non-traditional modes of instruction, including broadcast and closed circuit television, audio and video tapes, telephones, and other special media. Correspondence courses are offered through 22 academic departments and programs. The Office also assists academic units in presenting non-credit classes. short courses. and workshops both on and off campus.

The Engineering Extension Service is organized to bring to business and the engineering industry of the State the latest research results of the University's College of Engineering and of the engineering profession more generally. Much of this information is called to the attention of those who desire to put it to practical use through frequent, non-credit symposia, workshops, short courses, and conferences in specific engineering fields.

The Cooperative Extension Service of the College of Agriculture has been an integral part of the University since 1914, fulfilling its role in the off-campus land-grant educational mission of the University. Through cooperative agreements, its operations are funded by legislative appropriations (43%), federal grants (34%), and county support (23%). The Service maintains one office in each county of the State. In the spring of 1977, the faculty numbered 97 specialists and administrators in Pullman, Puyallup, and Prosser, and 154 faculty in the 39 counties of the State. The program emphasis of the Service is principally rural-oriented, assisting farmers and agribusiness to increase their agricultural production, families to improve their living patterns, communities and families to prepare youth for adult life, and local and State leaders to solve community problems. Increasingly Cooperative Extension has furnished leadership in programs dealing with such important issues as land use, taxation, water development, recreation, and problems of minority and low-income residents. Also, however, to a growing extent it is serving, with the aid of federal grants, the special needs of urban families for consumer education, youth programs, housing guidance, and basic nutrition information. In these same subject areas special educational programs, supported by funds from the Bureau of Indian Affairs, are likewise carried out for Native Americans. In achieving these objectives the Service makes use of the traditional extension information-providing techniques, but also conducts many workshops, seminars, short courses, and conferences.

Two additional extension-type units have been recently organized to bring specialized services to off-campus groups. The Center for Economic Development, initiated in 1976 with federal funding assistance, is providing administrative and economic counsel in the eastern part of the State to new businesses, firms in financial difficulties or considering expansion of varying kinds, and communities in need of business and economic advice. An Energy Extension Service, jointly operated with the University of Washington, will shortly furnish advisory services to the State in various energy fields.

ENROLLMENT. The total student enrollment in the fall of academic year 1977-78 stands at 16,665. Students at Washington State University come from every part of the State, from all sections of the country, and from every continent. In the current fall semester of 1977-78, for example, 55 per cent of the under-

graduate student body from within the state come from counties to the west of the Cascades; 45 per cent are from eastern counties. In this same semester the student body has residents of 49 of the 50 states. The international component of the student body totals 570 students. Seventy-five countries and all continents are represented. These students from outside the Northwest add an important national and international component to the student body and enrich the educational and social experience of the University's Washington students.

Table A.3 - Student Mix, Fall 1977

Washington State University

	Percent of total enrollment	Total
Age:		
21 and under	65.86	10,975
22-24	17.85	2,975
25-29	9.76	1,626
30-34	3.95	658
35 and over	2.48	413
age not indicated	.10	18
total	100.00	16,665
Sex:		
Male	57.31	9,550
Female	42.69	7,115
Sex not indicated	-	-
total	100.00	16,665
Residence:		
Washington residents	93.06	15,509
Non-residents	6.94	1,156
total	100.00	16,665
Class Standing:		
Graduate	11.96	1,993
Professional	1.84	306
Seniors	18.52	3,086
Juniors	19.11	3,185
Sophomores	19.42	3,236
Freshmen	25.27	4,211
Unclassified 5's	3.02	503
Other	.87	145
total	100.00	16,665

CENTRAL WASHINGTON UNIVERSITY

Central Washington University was established by the Legislature in 1890 as the Washington State Normal School. Its purpose was to train and educate teachers in the art of instructing and governing the public schools of this state. Classes began in September, 1891 following a legislative appropriation of $15,000 for the biennium. In 1937 the College became Central Washington College of Education, and in 1961, Central Washington State College. During spring 1977, following legislative action, the Governor approved a change in name to Central Washington University.

Central experienced a profound transition beginning in 1961 from a single purpose institution to a regional multi-purpose college with a strong liberal arts program to match its historic and well established mission of teacher preparation. Graduate programs at the master's degree level were developed and offered in many disciplines. Responding to student need and public interest, many job-oriented degree programs were initiated during the early 1970's. Since its early days, the University has served as a cultural and developmental center for the area. It is significant to note that Central is the only publicly supported senior institution in the central part of Washington.

ORGANIZATION. Central Washington University is governed by a five-member Board of Trustees appointed by the Governor and confirmed by the Senate. The Board, through its chief administrative officer, the President, establishes and reviews University policies and oversees the general management of the institution, including funds, facilities, construction and operations.

The University is currently organized into five schools: The School of Arts and Humanities; the School of Business and Economics; the School of Natural Science and Mathematics; the School of Social and Behavioral Sciences; and the School of Professional Studies. Supporting the academic programs in these schools are 320 faculty, 58 administrative and support staff, and a civil service staff of 460.

MISSION. The mission and roles of Central Washington University are identified in the Revised Code of Washington, R.C.W., Chapter 28B.40. Broadly stated, Central's mission is to provide educational services to the citizens of the State of Washington, with particular, but not exclusive, attention to the residents of the area including King, Pierce, Snohomish, Chelan, Kittitas, Yakima, Benton, Klickitat, Franklin, Douglas, Grant, Okanogan and Walla Walla counties. It exists so that people may learn and help others to learn those meanings which organize and symbolize human experience. The prime function is academic--discovering and creating new knowledge, preserving and transmitting it, applying it to life's experiences. To accomplish this end, the best qualified faculty must be employed; knowledgeable and imaginative members of the administration and staff must complement the faculty; and excellent library resources, appropriate facilities and insturctional equipment must be provided. These strengths directed through a well planned curriculum will yield quality education to all who meet the admission standards.

The mission is manifest through various roles. First, degree programs provide theoretical and practical instruction in the liberal arts and sciences and in the professions and applied fields through the bachelor's and master's levels. Such a multi-dimension curriculum requires a careful balance of the elements, ensuring that each contributes to the other in appropriate and effective ways. The balance may change as capabilities change, student populations change, and/or demands of society change. Regardless, the University must serve both those who want training to earn a living and those who want education to live more fully.

Second, non-degree programs are provided to meet the needs of those students who intend to transfer into professional programs at other institutions or enter the work force after one or two years of study. To a large extent, the content of these programs is set by the colleges or universities to which students transfer, certifying groups or employing agencies.

Third, opportunities to engage in both pure and applied research activities are provided to members of the faculty, frequently in the context of working with students. Results of their work are shared with others by means of scholarly publications, presentation of papers at public or professional meetings and lecturing.

Fourth, through its faculty, facilities and instructional materials resources, Central provides public services to citizens of the region and state. Such services include faculty advice, clinics, laboratories and research skills in problem solving, print and non-print instructional materials and college buildings for meetings and conferences of youth and adult groups.

Fifth, programs are designed to articulate with associate degree offerings of the various community colleges. A substantial portion of the campus enrollment consists of students who transfer from other institutions.

Sixth, the university serves as a cultural center for citizens of the state, particularly those residing in the central portion. Cultural events are provided through sponsoring art exhibits, musical and dramatic performances, special lectures and other such events. Library holdings are available to the public.

Seventh, Central attempts to meet educational needs of people at sites away from Ellensburg. Faculty knowledge and skills are used to provide inservice education for people employed in many professions and to help solve problems encountered by various communities. This role is one of providing academic services, within limitations of faculty and fiscal resources, to meet general public off-campus needs.

Central must continue to be responsive to the public by altering services to meet their needs. It is recognized that special groups of students such as ethnic minorities, senior citizens, or women, may have educational needs different from others; therefore, a variety of services may need to be provided. The long term value of the university rests with its being able to provide quality education through careful selection of new options for service and continued evaluation of existing programs; the University's mission and roles should direct these efforts.

ACTIVITIES. Central offers extensive programs of study at the undergraduate as well as graduate level. In the three bachelors degrees (Bachelor of Arts, Bachelor of Science., and Bachelor of Arts in Education), ninety-two majors are available to students, including one, the Interdepartmental Major, which provides opportunities for individually developed courses of study. At the graduate level

thirty-seven specializations are offered in four degree programs; Master of Arts, Master of Education, Master of Fine Arts and Master of Science.

The University is devoting effort to providing greater flexibility and more options for students through careful expansion of interdepartmental and interdisciplinary programs and is providing, where desirable and practical, greater opportunity for field-centered, off-campus, work-study experiences. A major thrust has been the development of more programs for students in occupational, technical and career training areas. In addition to the on-campus programs, the University initiated in 1974 an Extended Degree Program, which allowed groups of citizens at various sites around the state to complete a degree without residence on the campus in Ellensburg. Presently eight degree programs are offered in one or another of the following areas: Auburn, Bremerton, Edmonds, Everett, Ft. Lewis, Midway, Seattle, Tri-Cities, Walla Walla, Whidbey Island, and Yakima. In all appropriate areas, cooperative arrangements are made with local community colleges in instruction and use of facilities.

In terms of student interest the dominant undergraduate programs are in business administration, a number of teacher education areas, economics, health education, law and justice, and several vocational-technical fields. Unique programs include: allied health sciences, aerospace, cooperative education, honors college, paramedic, special education, and extended degree programs.

Educational services provided by colleges and universities are traditionally grouped into three categories; instruction, research or other creative activities; and public service. To the extent that these categories are separable and distinct, the activities and services related to instruction have always had the highest priority at Central Washington University. However, both research and public services are viewed as important and necessary and should continue to be encouraged and supported. The instructional programs should be complemented by research, the discovering or creating of new knowledge. The application of knowledge to human problems through service activities should also be of academic concern. Indeed, when faculty and students work together in research and public service activities, these efforts become instructional and the three categories merge into one.

ENROLLMENT. Table A.4 summarizes selected enrollment characteristics at Central this Fall. Approximately 45 percent of the students are over the age of 24, 55 percent are female and 25 percent are "unclassified 5's".

Table A.4 - Student Mix, Fall 1977
Central Washington University

	Percent of total enrollment	Total
Age:		
21 and under	36.5	2,887
22-24	18.7	1,475
25-29	14.9	1,181
30-34	9.7	764
35 and over	17.5	1,383
age not indicated	2.7	210
total	100.0	7,900
Sex:		
Male	45.0	3,558
Female	54.7	4,318
Sex not indicated	.3	24
total	100.0	7,900
Residence:		
Washington residents	96.8	7,651
Non-residents	3.2	249
total	100.0	7,900
Class Standing:		
Graduate	4.1	321
Professional	-	-
Seniors	16.9	1,338
Juniors	19.2	1,515
Sophomores	12.4	978
Freshmen	21.9	1,730
Unclassified 5's	24.7	1,953
Other	.8	65
total	100.0	7,900

EASTERN WASHINGTON UNIVERSITY

Founded in 1882 as the Benjamin P. Cheney Academy, Eastern Washington University has evolved from a State Normal School (1890) with the primary function of teacher-preparation into a multi-purpose educational center. A range of program responsibilities at both the undergraduate and Master's level currently characterize the University.

As a regional multi-purpose institution the University strives to enrich its programs of learning by focusing upon the resources and needs of the Inland Empire Region. Located in Cheney, 16 miles southwest of Spokane, the main campus comprises 330 acres. In addition, the University has a research teaching facility at nearby Turnbull Wildlife Refuge, and is a partner with Fort Wright College, Washington State University and Whitworth College in the maintenance of facilities for the Spokane Intercollegiate Nursing Center in Spokane. Eastern also leases space in Spokane for the Journalism program center, and for a second Dental Hygiene clinic. Late afternoon and evening courses in Spokane are conducted in various sites in the city, including public school buildings. Students and faculty carry on learning activities in a number of volunteer agencies and governmental offices throughout the Spokane area.

ORGANIZATION. Eastern Washington University is governed by a five-member Board of Trustees appointed for six year terms by the Governor with consent of the Senate. The trustees have full control of the institution; employ the president, staff and faculty; prescribe courses of study; and perform other responsibilities associated with the conduct of the institution.

Eastern is organized into eight academic schools or divisions: business and administration, continuing education, fine arts, general and special studies, health sciences, human learning and development, letters and sciences, and social work. In addition, the University maintains interdisciplinary centers for ethnic studies, economic education, safety education, environmental understanding, and urban and regional planning.

MISSION. Continued attention at the University has focused on institutional roles and mission. In December of 1972, a Task Force on Goals Development conducted an extensive review of previous studies and a survey of faculty,

student and community thinking. Their work culminated in a formal report issued in January, 1974, containing a Statement of Goals and eighteen Recommendations for action. In early 1977 the Statement of Goals was reviewed and reaffirmed, with a slight modification. The following statements, taken from the Statement of Goals, set forth the mission of the University.

Eastern Washington University is a multi-purpose institution of higher education which strives to enrich its programs of universal learning through a focus upon the resources and needs of the Inland Empire Region. Its primary mission is teaching; this mission is complemented by service to the region, by research, and by the continuous development of scholarship and creative activity. Its goals and programs must periodically be reviewed and revised to meet the challenges of change and emerging needs. In the development and administration of its programs, the institution will continually keep in mind the necessity of conserving public funds. Programs will be designed so as to achieve the appropriate standards of quality with the most efficient use of public resources.

Teaching and learning at the undergraduate level will be arranged to accomplish:

1. An understanding and appreciation of the cultural heritages, values, and physical nature of the world we live in, through a foundation of liberal education in all bachelor's degree curricula.
2. A broad range of degree programs, including selected professionally oriented and specialized studies to serve the educational needs of the state and region.
3. Preparation of students for and placement in socially valuable and individually satisfying careers.
4. A variety of learning options by means of multi-disciplinary studies, on- or off-campus instruction, and quality-assured innovative programs.
5. Study experience made meaningful by combining classroom learning with practical laboratory experiences on and off campus.

At the graduate level the University will offer selected academic and professional studies and degree programs with particular attention to the demonstrated and anticipated needs of the region for advanced learning and service and research related to these functions. Programs will be developed in consonance with State plans for the coordination of higher education and will include:

1. Preparing persons to take leadership in the positive uses of science and technology, including the development and protection of our urban and rural environment, and in the application of the liberal arts, humanities and fine arts.

2. Preparing persons for advanced graduate study.

3. Preparing persons to work in the areas of human, social and public service.

4. Developing persons for service in the health-related professions.

5. Educating leaders for business and public administration.

6. Extending the preparation of teachers, administrators, educational staff associates, and other specialists for the public schools and colleges.

ACTIVITIES. The University presently provides individualized study in fifty-two undergraduate and sixteen graduate degree programs including graduate studies in business and administration, social work, public administration, education, the arts, and sciences. In its regional role, the University is expanding instruction and field work in special education, criminal justice, health sciences and administration, environment, computer sciences, social work and human services, and recreation and parks administration.

While the University has maintained undergraduate instruction as its primary function, graduate professional degrees in human and public services have become a major emphasis in recent years. The Master of Social Work, the Master of Business Administration and the Master of Public Administration have been authorized since 1974, and graduates from those programs comprised 24% of the graduate degrees granted by Eastern during the last year.

Instructional accomplishments at Eastern include accreditation of the undergraduate social work program, attainment of candidacy status for the new Master of Social Work Education, and favorable review of the Public Administration degree program from the Council for Postsecondary Education. Additional recent instructional activities and accomplishments include AAASCB-accreditation of the School of Business for its undergraduate programs, overseas productions of the Drama Department by request of the USO, and provision of needed assistance to the recording industry in the Spokane area by the Radio-Television Department.

Although Eastern's primary function is teaching, this function is enhanced and complimented by both research and public service activities. The Primate Center, Turnbull Laboratory for Ecological Studies, Turnbull National Wildlife Refuge, and the Bureau of Business Research and Management Services are among the salient research activities that complement instructional activity. Public service activities include a broad range of services, some of which relate to specific fields such as business and education while others are more general and relate to all citizens of the area. Among these programs are included the Artist and Lecture Series, Educational Development Services, Urban/Regional Planning Center, College/Community Programs, and Safety Center.

ENROLLMENT. Eastern's primary service area is Spokane County which accounts for more than sixty percent of its enrollment. Seventy percent of the enrollment comes from residences in Spokane, Pend Oreille, Stevens, Lincoln, Adams, and Whitman Counties, all located in the eastern portion of the State. Table A.5 presents Fall, 1977 student enrollment data which indicate that most students are Washington residents, 66 percent are under the age of 25, and there are only 85 more females than males enrolled.

Table A.5 - Student Mix, Fall 1977

Eastern Washington University

	Percent of total enrollment	Total
Age:		
21 and under	45.9	3,139
22-24	20.4	1,392
25-29	16.7	1,144
30-34	7.8	535
35 and over	9.1	620
age not indicated	.1	7
total	100.0	6,837
Sex:		
Male	49.4	3,376
Female	50.6	3,461
Sex not indicated	-	-
total	100.0	6,837
Residence:		
Washington residents	94.0	6,427
Non-residents	6.0	410
total	100.0	6,837
Class Standing:		
Graduate	8.4	573
Professional	-	-
Seniors	19.6	1,339
Juniors	21.5	1,472
Sophomores	17.4	1,191
Freshmen	23.1	1,579
Unclassified 5's	10.0	683
Other	-	-
total	100.0	6,837

THE EVERGREEN STATE COLLEGE

The Evergreen State College, situated five miles northwest of downtown Olympia, was established by the 1967 Legislature, upon the recommendations of the Temporary Advisory Council on Public Higher Education (TACPHE), which called for "a College...with considerable freedom to shape its long-range destiny." TACPHE also recommended development of the opportunities for learning available in the State Capitol. The Committee pointed out that "the proposed location ranks high among the zones of the State having the greatest number of potential college students not already served by a state college or university. Only in the lower Puget Sound region could a new institution be so accessible to so many potential college students living beyond commuting range of existing publicly supported institutions." Senator Gordon Sandison, Chairman of the Advisory Council, remarked "it was not the intent of the Legislature that this would be just another four-year college; ...(the college would be) a unique opportunity to meet the needs of the students today and the future because the planning would not be bound by any rigid structure of tradition as are the existing colleges."

MISSION. In keeping with this direction, the Board of Trustees set Evergreen's goal as "purposeful innovation in educational and student living patterns, activities and community service programs as well as facilities." In 1975, the Council for Postsecondary Education recommended that the primary function of The Evergreen State College be the provision of interdisciplinary instruction in the Humanities, Social Sciences, and Natural Sciences through the master's degree level. The Council also pointed out the responsibility of Evergreen to provide an appropriate response to the educational needs in Southwest Washington.

The College's mission, therefore, can be summarized as follows: To provide an alternative to the traditional educational approaches for the State of Washington; to serve the residents of Southwest Washington; and to take full advantage of learning and teaching opportunities available because of the proximity of state government.

In relationship to its mission, the following general goals have been developed: Evergreen is a learning community which reflects the nature of the real world, where none of the problems man faces is simple, where none of the parts become more important than the whole, and where problems are addressed holistically rather than in a fragmented way. Evergreen provides an intellectual and developmental climate that enables students to:

- sharpen basic intellectual and practical skills;
- learn techniques for solving problems;
- become self-aware, self-reliant individuals who are respected and trusted to make decisions for which they assume personal responsibility;
- become personally flexible in career preparation so that they can adapt rapidly and effectively to changing conditions;
- develop positive attitudes toward life-long learning and problem solving;
- gain perspective about the world in which they live through participation in programs which emphasize relationships among fields of knowledge rather than treat academic disciplines as entirely separate;
- sample a reasonably wide range of actual jobs, working under conditions of genuine responsibility and subjecting this experience to reflection about themselves in their futures; and
- function effectively with others in group learning experiences.

Evergreen attempts:

- to develop a learning community reflecting the interrelationships of the real world;
- to increase the individual's ability to work with others cooperatively;
- to develop a mode of learning that starts from the individual rather than the curriculum; and
- to increase independent initiative and responsibility.

ACTIVITIES AND ACCOMPLISHMENTS. Evergreen's service to Southwest Washington has been enhanced by its flexible curricular approach. Evergreen's curriculum is particularly well able to meet the needs of students whose experience levels vary greatly. More than 1500 students, including 950 from the Thurston County area, are currently enrolled from the thirteen counties comprising Southwest Washington. Evergreen's outreach program in Vancouver, Washington, is the

first of several to serve upper-division Southwest Washington residents whose work and family obligations preclude attendance in residence on the Olympia Campus.

In a six-year period when hiring of Arts and Sciences graduates has diminished nationally, Evergreen's placement has been above the national average and among the State leaders each year. The placement rate from 1971 to 1975 exceeds 90% with over half in the private sector. Three percent of Evergreen graduates are self-employed. Evergreen graduates are enrolled in eighty-three separate graduate programs; twelve percent go immediately to graduate school and 18% enroll the following year.

In the highly competitive National Science Foundation's Student-Originated Studies Program, Evergreen has consistently ranked among the top ten schools in the United States. It is one of three who have received three such grants in any one year.

In a five-year period the faculty has attracted approximately $3,300,000 in grants and contracts, or $6400 per faculty member per year.

Evergreen's faculty, however, places first priority in teaching and all faculty research conducted at the institution includes students in significant roles. Evergreen's academic organization includes neither departments nor tenure. This results in a flexibility of assignment, centrally managed, which enables the College to maintain an actual twenty-to-one student/teacher ratio. Most faculty teach interdisciplinary group programs; faculty in these programs also carry a few individual study contracts, enhancing the availability of faculty expertise to students. The result for faculty is an average of twelve hours a week spent in lecture and seminars, seven hours in individual instruction, and three hours in other study modes (e.g., leading seminars or lecturing), but as a consequence, 95% of Evergreen's programs have fewer than 24 students. Individual faculty attention at Evergreen is thus a reality.

Coordinated studies are small team-taught programs, usually involving 60-80 students and three to four faculty members from different academic fields, featuring team study of a major theme (e.g., democracy and tyranny) or problem (e.g., applied environmental studies). They involve seminars, lectures, research and project work, intensive reading and writing assignments, workshops, laboratory and field exploration. Individual and Group contracts enable students to work in small groups or one-on-one with faculty, under terms of a contract, to complete an individualized, specific set of academic work, carrying out an investigation, mastering a set of skills, attacking a set of problems, or otherwise dealing with a specific body of subject matter. Courses compliment Evergreen's coordinated and contracted study programs, relating to specific bodies of subject matter and providing additional opportunities for skill acquisition. Students apply classroom knowledge in a practical setting through Evergreen internships which are integrated with coordinated or contracted studies.

Enrollment. After the 1967 Legislature authorized the creation of the first four-year State College in this century in Washington State, the planning and preparation began which culminated in the opening of doors for the first class in October 1971. Eleven-hundred students attended Evergreen its first fall quarter and that total has increased each year but one, to 2,544 in 1977. Nearly 60% of Evergreen's students are residents of Southwest Washington and another 20% are from out-of-state. The remainder are from throughout the State of Washington, in particular King County. There were 826 freshmen registered in Fall 1977. Approximately 9% of the enrollment is non-white and over 10% are veterans. The median age of students is 23 with 24% of the students 30-years old or more. A few Evergreen students enter directly from high school but most transfer from other institutions or wait several years after graduating from high school. Table A.6 summarizes student characteristics at Evergreen for Fall, 1977.

Table A.6 - Student Mix, Fall 1977

The Evergreen State College

	Percent of total enrollment	Total
Age:		
21 and under	37.46	953
22-24	22.13	563
25-29	16.31	415
30-34	8.92	227
35 and over	15.17	386
age not indicated	-	-
total	99.99	2,544
Sex:		
Male	49.80	1,267
Female	50.20	1,277
Sex not indicated	-	-
total	100.00	2,544
Residence:		
Washington residents	80.23	2,041
Non-residents	19.77	503
total	100.00	2,544
Class Standing:		
Graduate	-	-
Professional	-	-
Seniors	15.76	401
Juniors	22.60	575
Sophomores	18.87	480
Freshmen	32.47	826
Unclassified 5's	-	-
Other	10.30	262
total	100.00	2,544

WESTERN WASHINGTON UNIVERSITY

A bill establishing the New Whatcom State Normal School was passed by the legislature in 1893. The school opened in September, 1899, in a single building (now Old Main) located on the line dividing the communities of New Whatcom and Fairhaven. From a two-year, single-purpose normal school, Western evolved into a degree-granting institution in 1933, Western Washington College of Education in 1937, Western Washington State College in 1961, and Western Washington University in 1977.

ORGANIZATION. Western Washington University is today a multipurpose institution of higher learning serving nearly 10,000 students through undergraduate and graduate programs in six colleges, the School of Education and the Graduate School, the Center for Continuing Education, 28 departments and a variety of inter-disciplinary programs. Degrees offered include Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, Bachelor of Arts in Education, Master of Arts, Master of Science, and Master of Education. Plans presently call for the addition of the Master of Business Administration. One hundred forty-five major concentrations are available at the bachelor's degree level and 49 master's degree programs are offered by 26 curricular areas. The student body comes from a variety of social, ethnic, economic, and geographical backgrounds.

The faculty comes from the major centers of learning and research in the United States and abroad, and is selected to assure continuation of the university commitment to quality. The main campus is located in Bellingham, but Western extends its program to off-campus locations and serves the entire state.

MISSION AND ACTIVITIES. The academic disciplines around which Western organizes itself have grown chiefly from the liberal arts tradition. The departments of the Colleges of Arts and Sciences, Business and Economics, and Fine and Performing Arts and the School of Education provide the curricula and maintain the courses which shape the academic careers in majors, minors, and graduate programs of most of Western's students. Within these colleges and departments and outside them, Western encourages emphases on the theoretical, the practical, and the productive aspects of learning. Western's role is to offer students the best

education possible within available resources, and Western's mission is to ensure that the offerings described in the catalog are a viable and excellent means to this end.

Many of Western's students are enrolled in professional and occupational curricula that will enable them upon graduation to meet the initial employment requirements of a variety of careers. Because the preparation of teachers was the sole purpose of the original Normal School, Western's longest professional experience is in the preparation of educators: in the fall of 1977, about 17% of the students enrolled in undergraduate or graduate programs concerned with professional education.

Western is also concerned with pre-professional curricula. The requirements in these programs depend at least partially on the needs of employing or certifying groups outside the University. A substantial and increasing number of undergraduates enroll in pre-professional programs, and this enrollment growth parallels national trends of interest in legal, health, engineering, and other professions. Western will continue to be forthright and energetic in the counseling and advisement of students in these pre-professional programs presenting the obstacles as well as the opportunities involved. Faculty and departments are expected to stay informed of the progress of Western's pre-professional programs.

Western supports interdisciplinary and cross-disciplinary programs devised by its faculty and students to lend flexibility, responsiveness and innovation to its curriculum. The growing number of students who elect such programs demands support. Western's development of interdisciplinary programs such as Fairhaven College and Huxley College of Environmental Studies are recognized nationally and internationally. Programs such as Canadian-American Studies, East Asian Studies, Aquatic Studies, Archives and Records Management, and Visual Communication Education are responses to social and professional needs.

Off-campus and outreach programs reflect Western's fundamental role as an institution of liberal arts. The Bridge Program of Fairhaven College demonstrates that university education can reach well beyond the traditional college ages

of 18 to 24, and encourages a redoubling of effort in adult and lifelong education. Western's programs in Human Services, the Center for Urban Studies and Educational Graduate Centers are evidence of attempts to move beyond the boundaries of the campus to adjust services to the needs of the state.

Western supports a program of Continuing Education. Such a program demands careful management and evaluation of off-campus and outreach programs in partnership with the academic units that bear primary responsibility for the curricula and for the validity of the standards used in Western's outreach work.

ENROLLMENT. Studies show that the most important determinant of students' choice of a school is its proximity to their home. Western now draws the great majority of its students from west of the Cascades, with King, Whatcom, Snohomish, and Skagit counties (in that order) the source of more than 70 per cent of the enrollment. More students come from King County than from any other place. This is understandable since King County contains slightly more than a third of the state's population. Although Whatcom County's population is only 2 per cent of the state's total, about 20 per cent of Western's students resided in Whatcom County when first admitted to the University.

Table A.7 - Student Mix, Fall 1977
Western Washington University

	Percent of total enrollment	Total
Age:		
21 and under	54.5	5,099
22-24	19.4	1,819
25-29	12.8	1,198
30-34	6.1	571
35 and over	7.2	672
age not indicated	-	-
total	100.0	9,359
Sex:		
Male	49.2	4,609
Female	50.8	4,750
Sex not indicated	-	-
total	100.0	9,359
Residence:		
Washington residents	89.8	8,401
Non-residents	10.2	958
total	100.0	9,359
Class Standing:		
Graduate	7.5	702
Professional	-	-
Seniors	17.5	1,639
Juniors	19.4	1,819
Sophomores	18.5	1,735
Freshmen	28.0	2,625
Unclassified 5's	5.7	532
Other	3.3	307
total	100.0	9,359

WASHINGTON COMMUNITY COLLEGES

Community colleges, formerly junior colleges, have been operating continuously in the State of Washington since 1925. Prior to 1967 they were administered by common school districts. The state assumed responsibility for their funding and operation with enactment of the Community College Act of 1967.

ORGANIZATION. Overall supervision of the system is provided by the seven-member State Board for Community College Education. Each district has a five-member board responsible for the operation of its institutions. Both state and local board members are appointed by the Governor.

MISSION. The principal goals of the community college system relate to the mandates set forth in the Community College Act. The Act directs the system to offer an open door to every citizen regardless of academic background; provide comprehensive programs of academic transfer, vocational education and community service; avoid unnecessary duplication of facilities and programs and encourage efficiency, creativity and imagination; allow for growth and flexibility to meet future needs, and establish firmly that community colleges are an independent, unique and vital section of the state's higher education system, separate from both the common school system and other institutions of higher learning.

ACTIVITIES. During the first decade, the performance of the community college system has been exemplary in terms of these mandates. Enrollment has tripled from 50,000 to 150,000 individuals, in response to the open door policy. More than half the state's higher education students are in community colleges. The move toward greater comprehensiveness has been characterized by an increase in the proportion of vocational students from 22 percent of the total enrollment to 47 percent. At the same time, the community colleges have achieved unparalleled efficiency in the utilization of public funds.

The community college system serves a clientele unlike that of any other system of education. The student body is older, averaging approximately 29 years of age. Students enrolling directly from high school represent less

than 15 percent of the total enrollment. The community college enrollment includes comparatively large proportions of minority students, veterans, women beyond normal college age, senior citizens, high school dropouts, residents of state penal institutions and low-income students.

To serve so diverse a student body, the community college system provides a greater variety of programs than is typical of other higher education institutions. One third of its students are enrolled in preparatory vocational programs, leading to first-time employment. Many more are enrolled in supplemental vocational programs, improving their job skills or training for new occupations. The community colleges serve about 80 percent of the post-high school vocational students in the state. Some 6,000 adults come to the community college system each year to complete their grade school and high school educations. Programs are provided to help students overcome learning deficiencies. At the same time, the community college system continues to play the major role in providing freshman and sophomore-level studies to those who plan to transfer to four-year institutions and obtain a baccalaureate degree.

The community college system is uniquely equipped to dispense a wide variety of services to a broad segment of the population. Comprised of twenty-two districts, it operates 27 campuses and more than 500 off-campus education sites. Most of the state's citizens are within relatively easy commuting distances of a campus.

In the immediate future, the community college system anticipates continuation of a moderate level of growth, particularly in vocational enrollments and in continuing education.

The continued growth of the community college system, with its emphasis on serving less traditional students -dropouts, the unemployed, minorities, senior citizens, low-income citizens--represents a substantial social and economic contribution to the state in terms of increasing individual productivity, diminishing the drain on more expensive public services and making it possible for tax users to become taxpayers.

ENROLLMENT. Table A.8 presents student characteristic data for the Community College system in Fall, 1977.

TABLE A.8

SUMMARY OF STUDENT CHARACTERISTICS

ACADEMIC AND OCCUPATIONAL STUDENTS ONLY
WASHINGTON COMMUNITY COLLEGES
FALL QUARTER, 1977
10TH DAY

Total Academic & Occupational Students	159,347
Total Community Service Students	11,605
Total Fall Quarter Enrollment	170,952

SEX	Number	Percent
Male	74,198	46.56
Female	85,149	53.44
	159,347	100.00

AGE		
20 Years & Below	37,182	23.33
21-29 Years Old	53,864	33.80
30-30 Years Old	30,493	19.14
40-49 Years Old	14,237	8.93
50-59 Years Old	8,078	5.07
60 & Above	2,913	1.83
Not Indicated	12,580	7.89
	159,347	100.00
Average Age	29	

RESIDENCY STATUS		
Resident	154,122	96.72
Non-resident	5,225	3.28
	159,347	100.00

SOURCE		
Returning	41,300	25.92
High School	12,521	7.86
Transfers-In	4,063	2.55
Military/Out-of-State/ All Others	101,463	63.67
	159,347	100.00

ETHNIC BACKGROUND	Number	Percent
Asian American	2,655	1.67
Black American	4,351	2.73
American Indian	2,324	1.46
Chicano/Mexican American/ Other Spanish Surnamed	2,345	1.47
Other Minority	2,645	1.66
Total Minorities	14,320	8.99
White American	116,237	72.95
Foreign Students	4,972	3.12
Not Indicated	23,818	14.95
	159,347	100.00

CREDIT HOUR LOADS		
9.9 Credits and Less	98,235	61.65
10.0 Credits and More	61,112	38.35
	159,347	100.00
Average Credit Hour Load	8.1	

STUDENT INTENT		
General Studies (Degree/ Certificate, Developmental)	10,645	6.68
College Transfer (Academic)	23,641	14.84
Adult Basic Education	3,432	2.15
High School/GED Certificate	5,515	3.46
Occupational Prep.	29,382	18.44
Occupational Prep. Applic.	4,509	2.83
Apprentice	2,853	1.79
Occupational Supplementary	28,616	17.96
Occupational Home & Family	12,973	8.14
General Studies (Non-Degree)	21,702	13.62
Other/Not Indicated	16,079	10.09
	159,347	100.00

SOURCE: MIS-1 Student Enrollment Report, SBCCE.

OFM/PEES/P-426
4/78

VOCATIONAL-TECHNICAL INSTITUTES

Five vocational-technical institutes function in administering and coordinating over 150 different vocational programs in the state for the purpose of providing vocational technical training, retraining, and upgrading for persons sixteen years of age and older. This nongraded, continuous specialized training permits students with or without high school credentials to enter at any time, to progress in accordance with individual aptitudes and to complete training when job skills and concepts have been mastered to such an extent that job entry and job retention are possible.

ORGANIZATION. Vocational-technical institutes in Washington are operated by local school districts and fall under the purview of the Superintendent of Public Instruction. Programs are broadly grouped into preparatory, supplemental, and apprenticeship categories and are designed to enable students to attain and perfect the necessary vocational skills to acquire employment. Close cooperation with representatives of labor and management facilitates the ability of these institutes to meet vocational needs through the following broad program areas: Agriculture, Business and Office, Distributive Education, Home and Family Life, Trade, Technical and Health Occupations.

The five vocational-technical institutes also provide instructional offerings designed to raise the educational level of adults who have not obtained an education commensurate with their ability to learn. These programs, non-vocational in nature, are designed to provide adults an opportunity to complete their high school education.

The vocational-technical institutes, located in Whatcom, Pierce and King Counties include: Bellingham VTI, Clover Park VTI, L.H. Bates VTI of Tacoma, Lake Washington VTI, and Renton VTI. All schools offer both preparatory and supplementary programs except for Lake Washington which offers only preparatory programs.

To insure that the trainee is taught only those skills and concepts that are essential, a duly constituted craft advisory committee cooperates in developing and monitoring the program curriculum. In addition to curriculum involvement, the committee

recommends personnel for employment as instructors, participates in the evaluation of the program and personnel, and assists in placing persons who successfully complete training. Each committee is comprised of equal numbers of representatives of management and labor. When the occupation is organized, employees are chosen by the labor union having craft jurisdiction. When an employer organization exists, they select the management participants. In the case of apprenticeable occupations, the Joint Apprenticeship Committee serves as the institute's craft advisory committee.

MISSION. The mission of vocational education in the State of Washington is to provide for all citizens ready access to vocational education which is of high quality, which is realistic in terms of actual or anticipated opportunities for gainful employment or useful employment in the home environment, and which is suited to their needs, interests and ability to benefit from such education within the capability of training institutions to provide such education. A number of goals are identified in the "Five Year Plan for Vocational Education" developed by the Commission for Vocational Education articulates this mission. Among these are included:

Goal: To extend and improve new and ongoing programs of vocational education and to satisfy the training needs of vocational students in light of actual and/or anticipated employment in agricultural occupations, distributive occupations, health occupations, occuaptions that use the knowledge of home economics, business and office occupations, technical, trade and industrial occupations. (see Pages 263-330)

Goal: To extend and improve supplementary vocational programs designed to provide inservice upgrading training for individuals currently employed or who have been employed in an occupation or related field. (see pages 331-332)

Foal: To improve home environments and the quality of personal and family living in consumer and homemaking programs for males and females, who have entered or are preparing to enter the work of home. (see pages 414-427)

INSTRUCTIONAL ACTIVITIES. Vocational instruction in the VTI's is characterized as being open entry-open exit and continuous. Students enter when a training station is available. Students exit when they have developed the capability to be usefully employed. Students progress in accordance with individual interest,

motivation, and aptitude. One student may need 1,080 hours of training to be able to work as a welder while another may be able to develop comparable capability in half that time.

Not every program, of course, is fully individualized. Factors hindering attainment of open entry-open exit and continuous instruction for all students include mandated hours for licensed occupations. Given these conditions, institutes seek to provide realistic job training in the shortest period of time and at the least possible cost without compromising program standards. Consequently, training within the vocational-technical institutes is specialized. A deliberate effort is made to ensure that training includes only that which is relevant to the job for which the training is being offered. The trainee is held accountable for mastering those skills and that conceptual knowledge essential to seeking, gaining, and holding a job. In this system, the worker of tomorrow is trained by the journeyman of today.

Table A.9 - Student Mix, FY 1976

Vocational-Technical Institutes

	Percent of total enrollment	Total
Program:		
Preparatory	38.4	26,405
Supplementary		
Apprenticeship	2.8	1,925
All Other	58.8	40,432
	100.0	68,762
Age:		
Under 18	1.9	1,287
18-19	10.2	7,038
20-21	11.3	7,742
22-24	12.2	8,401
25-29	14.8	10,163
30-34	10.6	7,305
35 and over	27.6	19,018
not indicated	11.4	7,808
	100.0	68,762
Sex:		
Male	58.6	40,273
Female	41.4	28,489
	100.0	68,762

Note: Actual numbers may vary as the above distribution is based on a 68 percent sample of the universe.

Source: Special request, Superintendent of Public Instruction, State of Washington, 1977

APPENDIX B

A SUMMARY REPORT OF THE WORKSHOP ON LONG RANGE ENROLLMENTS IN POSTSECONDARY EDUCATION

APPENDIX B

A SUMMARY REPORT OF THE WORKSHOP ON LONG RANGE ENROLLMENTS
IN POSTSECONDARY EDUCATION

A two day workshop was held at Fort Worden to examine some of the impacts long range population characteristics may have on future enrollment trends and policies, particularly as they relate to future operating and capital budgets in postsecondary education. Participants in the workshop represented a cross-section of persons having significant involvement in the various aspects of postsecondary education in the State. A list of the participants and their agency affiliations appears in Exhibit I.

In preparation for the workshop each participant received a package of materials regarding state and national information on enrollment forecasting, demographic changes and their relationship to educational retrenchment, and future educational issues and alternatives. These materials were intended to give sensitivity and focus to key issues facing postsecondary education in the future. Each participant also received a topical outline of possible study concerns. As it turned out, this outline became a working tool for the conference (see Exhibit II).

The workshop began with a presentation by Dr. Donald Pittenger, Population Studies Division, OPP&FM, regarding the demographic outlook for the State of Washington and the enrollment implications of this outlook for postsecondary education in the future. The consequences of a shifting age structure brought on by a decline in fertility will negatively impact the 18-21 age cohorts during the 1980's and early 1990's (i.e., the postsecondary population for the 80's and 90's is already born.) The need to assess the magnitude of this change in the traditional college age cohorts and to forecast participation rates for other potential clientele in postsecondary education is required if effective and efficient planning for the delivery of educational services in the state is desired.

The afternoon session of the workshop began with Dr. William Chance, Council for Postsecondary Education, reviewing and highlighting some of the planning and policy recommendations contained in the Councils six year plan (1976-1982). In the face of retrenchment and enrollment uncertainties, the council has identified fifteen matters which seem likely to require attention during the current planning cycle (Planning and Policy Recommendations for Washington Postsecondary Education: 1976-1982, pp. 42-43.) These matters are either directly or indirectly linked to enrollment uncertainties and underscore the importance of a long range enrollment study. Of particular importance is the need to ascertain "residual educational needs within the state's population" so that off-campus programs, regional cooperation, roles and missions issues, etc. can be effectively addressed.

The remainder of the workshop was divided into two discussion groups which were led by Dr. Ross Armstrong, Washington State University and Nat Gross, Planning Division, OPP&FM. Dr. Armstrong's group focused on concerns related to "academic" postsecondary education while the group led by Nat Gross focused on "non-academic" or vocational education. Each group was charged with the responsibility of identifying enrollment issues, data definitions and possible data sources thereby giving direction and focus to the study. The results of these discussions are presented below:

1. General Conclusion. A definite need exists to undertake a long range enrollment study for the State of Washington. The Population Studies Division, OPP&FM should be responsible for postsecondary enrollment forecasts that are precise over the next six years and general to the year 2000.

2. A long range study of enrollments requires that attention be given to a number of factors which influence the participation rates of postsecondary education clientele. These factors include:

   a. Demographic characteristics. A forecast of age and sex characteristics of the population by county are necessary inputs to forecasting enrollments. Assumptions regarding the participation rates by age and sex can then be used to estimate educational demand. Since this is an ongoing function of OPP&FM it will not require generating new data unique to the enrollment study.

   b. Occupational, social, and economic factors. Occupational demand is difficult to measure and forecast. Rather than attempt a separate occupational outlook it was felt the study on enrollments could use existing forecasts of job opportunities as input into assessing educational demand. Subsequently, attention could then be given to the relationship between educational training and occupational demand. Furthermore, the study should examine the tendency for students to continue education in times of low job opportunities. To what extent does a manpower oversupply impact enrollment?

      Other social and economic factors which are difficult to measure but may impact educational demand include attitudes towards degrees, student intent, cost of living on campus, tuition increases, inflation, and energy shortages. Where reasonable, assumptions should be made regarding these factors.

   c. Veterans Analysis. The study should include an analysis of the impact of changing legislation regarding veterans benefits for education. Some analysis has already been done in this area and it should be incorporated.

d. High School graduates. Assumptions regarding the participation rates of new high school graduates are required. Where, when, and at what types of schools will new high school graduates make demands for postsecondary education? A study addressing these questions should be undertaken as part of the long range enrollment study in order to make reasonable assumptions about participation rates.

e. Residual Educational Needs. At a time when the age structure is shifting to an older population it is essential that some attention be given to assumptions made about the participation of persons over 30 years of age in postsecondary education. Will there be an increase in demand for education from this segment of the population? If so, in what areas? By what types of schools? Is the demand contrived or real? Are there other residual educational needs not being met in the State?

f. The competition factor. Given a shrinking supply of the 18-21 year old cohort, there may be an increased demand for these people in industry, defense, etc. thereby further impacting postsecondary enrollments.

3. Data collection needs.

a. An intensive survey of the current status of non-academic (i.e., vocational) education should be undertaken. Much of this information is now available but, unfortunately, not in any single place or in a uniform format. This includes data on skill centers, vocational technical institutes, avocational education, four year vocational programs, inverted curricula, "extended" occupational programs and "compatible" studies programs. Where, how, when, by whom are educational services being delivered and funded in the State (both academic and non-academic)?

b. An inventory of off-campus enrollments should be undertaken to determine where this growth is occurring (e.g., geographic areas, program areas, at what types of schools, etc.) For the most part, this type of analysis is essential in assessing the "residual education needs" of the future.

c. An analysis of student intent data should be undertaken in terms of the outlook for a four year degree vs. a two year degree. An evaluation of the validity of existing student intent data needs to be undertaken.

d. Data from the HEEP and MIS forms are essential. Furthermore, similar data from private institutions (colleges, universities, proprietary schools) and vocational-technical schools need to be generated for a system-wide analysis.

e. A closer examination of graduate school enrollment is needed. This may require new data to be generated by institutions involved in graduate education.

f. Concurrent with the demographic analysis undertaken in 2a, an analysis of population growth areas in the state will need to be estimated.

g. A survey of other states should be undertaken to ascertain the extent to which other states are planning and preparing for retrenchment in postsecondary education. Are any studies being conducted which would help us in a study of long range enrollments?

4. Alternatives for the Future: Implications of the Enrollment Analysis and Forecasting. Much of the workshop discussion concerned itself with planning and policy implications for postsecondary education that hinge on expected enrollments in the state. As such, it underscores the need for a long range enrollment study. Some of the major areas of concern were:

   a. The delivery of educational services. In the event of enrollment stablilization or decline the competition for the delivery of educational services is likely to be intensified. Under such conditions, a number of policy issues clearly emerge which should be researched:

      (1) Roles and missions of existing institutions regarding governance, articulation and cooperation, duplication of services, etc.

      (2) Controlling and/or redistributing enrollments through admissions policies versus open competition for enrollments.

      (3) The feasibility of closing an institution(s) to maintain the viability of the rest.

      (4) The extent to which marketing strategies (e.g., television commercials) should be used to increase enrollments by appealing to non-traditional students, high school graduates, etc.

      (5) The extent to which off-campus programs should be expanded and funded.

      (6) An assessment of the differential impact of retrenchment on the separate institutions. It is reasonable to assume that enrollment changes in the future will vary by type of institution, geographic location, etc.

b. Budgeting for postsecondary education. In the past, enrollment and enrollment growth have been the primary drivers of budgeting for postsecondary education. In a no-growth situation, a number of issues emerge regarding the formula for budgeting postsecondary education.

(1) In the interest of avoiding the situation where educational demand is contrived, should alternative drivers of educational budgeting be considered (e.g., economic conditions, employment, placement of graduates, etc.)

(2) If enrollments continue to be the driver should the formula be based on contractual enrollments or lagged enrollments? Should a six year budget plan be developed with two year reviews and adjustments? What about instituting a "user's fee" system?

(3) In a no-growth environment, how should program changes be funded?

(4) How feasible is it for four year schools to use part time faculty like they do in the community college system?

(5) Should off-campus programs continue to be funded differently in the two year as opposed to the four year schools?

Based upon the above considerations, it was recommended by the Advisory Committee on Long Range Enrollments that a research proposal be written which (1) identifies the parameters of the study, (2) states the research objectives and assumptions, (3) specifies data definitions, requirements and retrieval procedures, and (4) presents a cost analysis of the study. This proposal is to be written by June 1, 1977.

EXHIBIT I

Members of the Long Range Enrollment Study Advisory Group
Fort Worden May 8 through May 11, 1977

University of Washington	Gary Millar
Washington State University	Ross Armstrong
Central Washington University	John Purcell
Eastern Washington University	Don Manson
The Evergreen State College	Dean Clabaugh
Western Washington University	Gene Omey
Office of Financial Management	John R. Walker
" " "	Donald Pittenger
" " "	David Brinkerhoff
" " "	Claire Bishop
" " "	Linda Swanson
" " "	George Van Mieghem
" " "	Bob Jacobs
" " "	Nathan Gross
State Board for Community College Education	Earl Hale
" " " " "	Dick Moe
" " " " "	Steve Van Ausdle
" " " " "	George Douglas
Council for Postsecondary Education	William Chance
" " "	Neil Uhlman
Commission for Vocational Education	Gil Zuerlein
Superintendent of Public Instruction	Nancy Johnson
" " "	Al Metcalf
Council of State College & Universities Presidents	Robert Carr
" " " "	Kay Sherman

173

EXHIBIT II

Phase I. DEMOGRAPHIC DEMAND OUTLOOK MODULE

ELEMENTS:

1. Population Forecasts by Age and Sex: Alternatives
2. Forecast of Full-Time Enrollment Rates: Alternatives
   a. Baccalaureate (Upper, Lower Division)
   b. Vocational
   c. Graduates and Professional
3. Occupation Profile Forecast: Alternatives
4. Post-Age 25 Occupation/Income/Educational Attainment Matrices* (including ABE, GED, GS, etc., if data are available historically).
5. Education Cost/Demand Elasticity Functions** (Part time, on campus - off campus degree and non degree).
6. Geographic Detail*

*Long-Tern Products. Post-age 25 matrix might take a year, elasticity functions may take longer (or be impossible) due to need for special data. Geographic breakdown would be post-September and would be alternative age-sex projections coupled to alternatives enrollment rate assumptions, at first.

**Data may be difficult to obtain. There may be studies by other states which could help. Otherwise, surveys will be required, and that will be costly.

Phase II. IMPLICATION OF ALTERNATIVE DEMOGRAPHIC DEMAND ON THE DELIVERY OF EDUCATIONAL SERVICES

ELEMENTS:

1. Labor Market Futures and Educational Problems
2. Vocational Education Delivery Systems
   a. Vocational Education (9-12)
   b. Development of Skill Centers
   c. Vocational-Technical Institutes
   d. Community Service or Avocational Education in Common Schools, Vocational Technical Institutes, and Community Colleges
   e. Four Year Vocational Programs
3. Where, When, How, by Whom, are Educational Services being Delivered and Funded in State and in Neighboring States?
4. Geographical Areas within the State that are Growing, Remaining Stable, or Declining.
5. Outlook for Four-Year Degree Versus Two-Year Degree.
6. Outlook and Committment for Graduate Education.
7. Outlook for Evening and Cff-Campus Services
8. Outlook for Veteran Enrollments and Impact on Programs
9. Assessment of Student Intent. (Washington Pre-College Tests, Class of '72 Longitudinal Study, and Community College Student Intent Data)

Phase III. POLICY IMPLICATION OF DEMAND FOR AND DELIVERY OF EDUCATIONAL SERVICES

ELEMENTS:

1. How do you Fund Program Change without Program Growth?
2. Conflicting Policies
   a. Differential Tuition Cost of Part-Time versus Full-Time Student.
   b. Differing Tuition levels for the same services delivered.
   c. Policy consistency in Faculty Utilization.
3. Should there be a Differential Price Structure for Time of Day - Time of Year to Insure Facility Useage?
4. Costs versus Benefits of extending Support Services to Off-Campus Students.
5. What to do if institutional campus enrollments decline?
   a. Measures to Balance and/or Redistribute Enrollments in the State (e.g., controling enrollment of new entrances)
   b. Contract Enrollment Methodology

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